Appendix B

ARBORIST REPORT

VMC
Schedule 'C' Class Environmental Assessment (EA) Studies for the Extensions of Interchange Way and Millway Avenue

Arborist Report

FINAL
May 2025

DOWNTOWN
vaughan
METROPOLITAN CENTRE

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1 Introduction

1.1 Project Overview

WSP Canada Inc. (WSP) has been retained by the City of Vaughan to assist in the Municipal Class Environmental Assessment (MCEA) process for the extensions of Interchange Way from Commerce Street to Creditstone Road, and Millway Avenue from Highway 7 to Interchange Way. WSP is also assisting the City in updating the Transportation Master Plan (TMP) to confirm transportation needs, supportive policies, and a phasing strategy to 2041 with a focus on street connectivity, accessibility, and support for multi-modal mobility (i.e., walking, cycling, transit, ride share).

The Vaughan Metropolitan Centre (VMC) is proposing infrastructure upgrades in line with the Transportation Master Plan (TMP) Update and Extension of Millway Avenue and Interchange Way in Vaughan, Ontario.

This arborist report outlines the results of a tree inventory that assessed trees located within the site boundary (see Figure 1).

Due to the slight modifications to the preferred alternative design for Interchange Way, additional inventory and assessment of trees located south of the Site Boundary noted will be required. The majority of tree data collected remains accurate and relevant to the anticipated impacts of the project. This report will need to be updated with additional vegetation data, tree protection and mitigation recommendations during the detailed design.

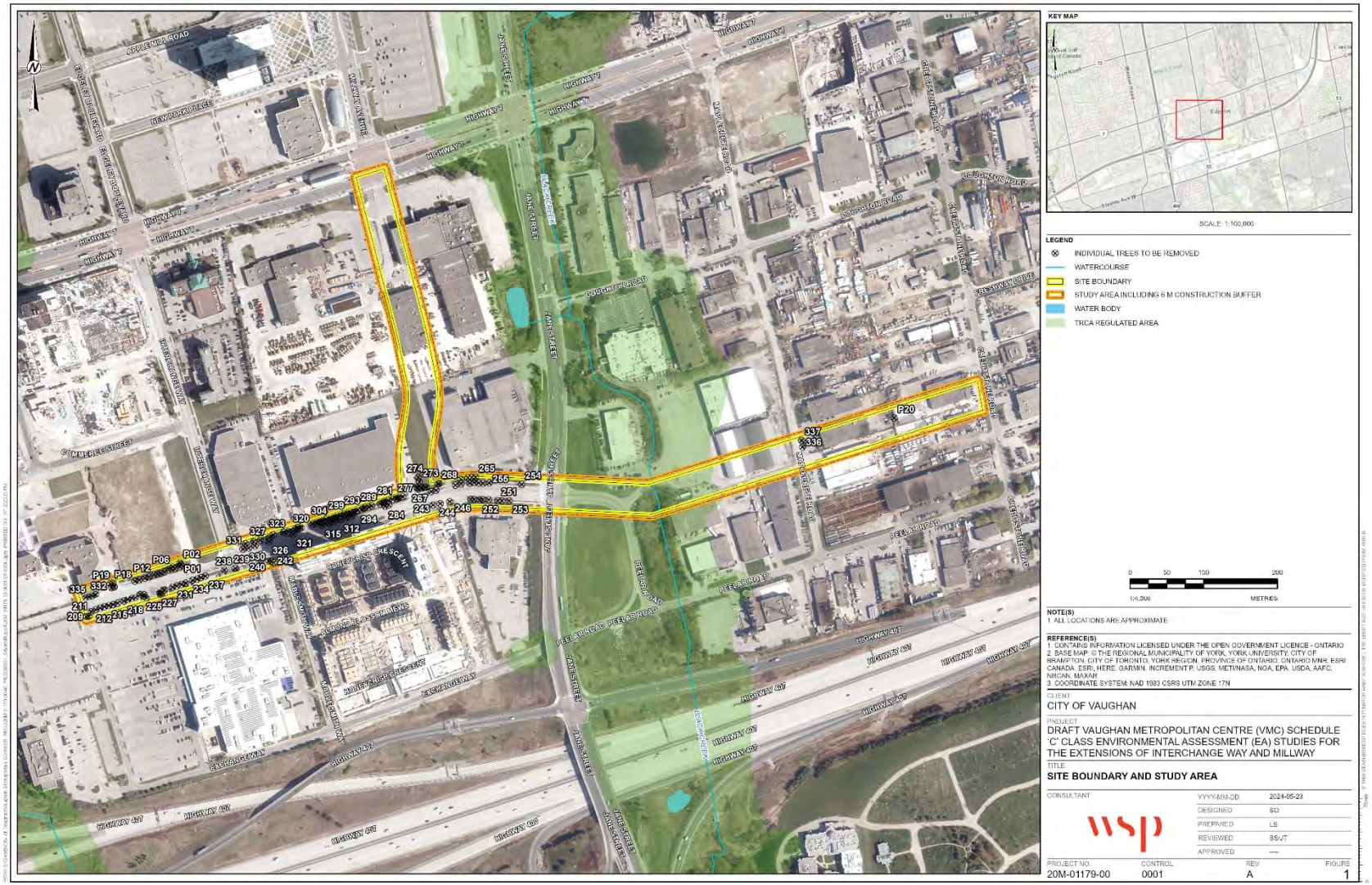
1.2 Study Area

The Millway Avenue Extension will extend Millway Avenue from Interchange Way to Highway 7. The Interchange Way Extension will follow the existing road alignment of Interchange Way between Commerce Way and Jane Street where the extension will then

run east of Jane Street to Creditstone Road. The Study Area encompasses both road extensions as shown in Figure 1.

The Study Area is sparsely vegetated and runs through a largely industrial area. Trees are present along boulevards and in a small, forested area east of Jane Street. The site boundary runs through a Toronto and Region Conservation Authority (TRCA) Regulated Area as shown in Figure 1.

Figure 1. Site Boundary and Study Area



1.3 Report Framework

This report details the results of the tree inventory, provides an overview of the relevant policy and legislation in relation to the proposed works, and makes recommendations for tree protection, tree injury and removals based on the proposed works.

This report is to be read in conjunction with:

- Appendix A: Tree Inventory and Preservation Table
- Appendix B: Tree Inventory Plan
- Appendix C: Photographic Inventory
- Appendix D: NHF Details
- Appendix E: City of Vaughan Tree Protection Plan Information

2 Existing Conditions

2.1 Overview

The City of Vaughan is proposing infrastructure upgrades along Interchange Way from Highway 400 overpass to Creditstone Road and along Millway Avenue from Highway 7 to Interchange Way. Proposed work includes the replacement of current roadway and the extension of Interchange Way and Millway Avenue within the listed limits.

This arborist report outlines the results of a tree inventory that assessed trees within the Study Area that may be impacted by the proposed works.

2.2 Definitions

Table 1. Definitions

Term / Acronym	Definition
Tree Number	This number refers to the number on the tree tag or alpha-numeric, alphabetical or tree grouping label listed in Table 2: Tree Inventory and Preservation Charts and labelled on the Tree Preservation Plans (e.g. 142 or A1).
Tree Grouping (TG)	A tree grouping is more than one (1) tree located within proximity of other trees with no separation between the canopies.
Diameter at Breast Height (DBH)	This refers to diameter (in centimetres) at breast height and is measured at 1.4 m above the ground for each tree.
Tree Protection Zone (TPZ)	This is the area around a tree that is to be protected through tree protection measures e.g. hoarding. No construction activities are to be undertaken within this zone.
Union	Junction point where two or more stems meet. A 'U' shaped junction indicates a well-formed union. A 'V' shaped junction indicates a weakly formed union, whereas stems grow and increase in girth, weak bark called 'included bark'

Term / Acronym	Definition
	forms within the junction and stems start to push apart causing vertical cracks and loss of structure.
Imminently Hazardous Tree	Refers to a destabilized or structurally compromised tree that is in imminent danger of causing damage or injury to life or property.
Injure and Injury	Described as any act that will harm a tree's health, including failure to protect in accordance with standards set by the City's tree protection / preservation policy.
Root Zone	Refers to the subterranean area around the tree measured from the trunk to up to 2 to 3 m beyond the dripline.
Critical Root Zone	The minimum area of the root system necessary to maintain vitality or stability of the tree. Typically, this area extends to the dripline of the tree. The severing of one root can cause approximately 5-20% loss of the root system. A reduction of this area by greater than 30% can pose stability concerns for the tree.
Trunk Integrity (T.I.)	This is an assessment of the trunk for any defects or weaknesses. It is measured on a scale of poor, fair, good.
Canopy Structure (C.S.)	This is an assessment of the scaffold branches, unions and the canopy of the tree. This is measured on a scale of poor, fair, good.
Canopy Vigour (C.V.)	This is an assessment of the health of the tree and assesses the amount of deadwood and live growth in the crown as compared to a 100% healthy tree. The size, colour and amount of foliage are also considered in this category. This is measured on a scale of poor, fair, good.
Good	Tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI, CS, CV).
Fair	Tree displays 15%-40% deficiency/defect within the given tree assessment criteria (TI, CS, CV).
Poor	Tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI, CS, CV).

2.3 Tree Health

Tree health ranged between good and poor, with a majority observed to be in good condition (Appendix A). Signs of decline and defects were observed on some trees including:

- Damage on trunk;
- Frost crack;
- Girdling roots;
- Exposed roots with wounds;
- Peeling bark;
- Dieback;
- Lean;
- Budling at base;
- Wound at base;
- Chlorosis;
- Epicormic shoots;
- Decay;
- Broken branches; and,
- Topped.

3 Policy Context

3.1 The Regional Municipality of York

3.1.1 Forest Conservation By-law (2013-68)

The Regional Municipality of York Forest Conservation By-Law (2013-68) prohibits or regulates the destruction or injuring of trees in woodlots or woodlands in the Regional Municipality of York. The By-law applies to all woodlands and woodlots in those lower-tier municipalities which have delegated to the Region their power under subsection 135(10) of the Municipal Act, 2001, including any delegation made prior to the passing of this by-law.

The By-law defines 'woodland' and 'woodlot' as follows:

'WOODLAND' means land at least 1 hectare (ha) in area with at least:

- 1000 trees, of any size, per ha;
- 750 trees, measuring over 5cm diameter at breast height (DBH), per ha;
- 500 trees, measuring over 12cm DBH, per ha; or
- 250 trees, measuring over 20cm DBH, per ha.

'WOODLOT' means land at least 0.2ha in area and no greater than 1ha in area, with at least:

- 200 trees, of any size, per 0.2 ha;
- 150 trees, measuring over 5cm DBH per 0.2 ha;
- 100 trees, measuring over 12cm DBH, per 0.2 ha; or
- 50 trees, measuring over 20cm DBH, per 0.2 ha.

Exemptions

This by-law does not apply to:

- activities or matters undertaken by a municipality or a local board of a municipality;
- activities or matters undertaken under a license issued under the Crown Forest Sustainability Act, 1994;

- the injuring or destruction of trees by a person licensed under the Surveyors Act to engage in the practice of cadastral surveying, or his or her agent, while making a survey;
- the injuring or destruction of trees imposed after December 31, 2002 as a condition to the approval of a site plan, a plan of subdivision, or a consent under section 41, 51, or 53, respectively, of the Planning Act or as a requirement of a site plan agreement or subdivision agreement entered into under those sections;
- the injuring or destruction of trees imposed after December 31, 2002 as a condition to a development permit authorized by regulation made under section 70.2 of the Planning Act or as a requirement of an agreement entered into under the regulation;
- the injuring or destruction of trees by a transmitter or distributor, as those terms are defined in section 2 of the Electricity Act, 1998, for the purpose of constructing and maintaining a transmission system or a distribution system, as those terms are defined in that section;
- the injuring or destruction of trees undertaken on land described in a license for a pit or quarry or a permit for a wayside pit or wayside quarry issued under the Aggregate Resources Act;
- the injuring or destruction of trees undertaken on land in order to lawfully establish and operate or enlarge any pit or quarry on land;
- that has not been designated under the Aggregate Resources Act or a predecessor of that Act;
- on which a pit or quarry is a permitted land use under a bylaw passed under section 34 of the Planning Act;
- the injuring or destruction of trees required in order to erect a building or structure, in respect of which a building permit has been issued, provided that the total area within which trees are injured or destroyed is within 15 metres (m) of the outer edge of the building or structure or proposed building or structure;
- the injuring or destruction of trees that is reasonably required in order to install and provide utilities to the construction or use of a building or structure in respect of which a building permit has been issued, including the installation of a primary septic bed;
- the injuring or destruction of trees that is reasonably required in order to install and provide utilities to a single lane driveway for vehicular access to a building or structure in respect of which a building permit has been issued;
- the injuring or destruction of trees provided that no more than the equivalent of six (6) bush cords of wood are injured or destroyed in a calendar year from an owner's

property for the owner's own use, and that the injuring or destruction of trees is consistent with good forestry practices;
- the injuring or destruction of Eastern White Cedar trees provided that no more than the equivalent of three (3) bush cords of wood are injured or destroyed in a calendar year from an owner's property for the purpose of maintaining existing fencing, and that the injuring or destruction of trees is in accordance with good forestry practices;
- the injuring or destruction of trees along a property boundary to a maximum width of 2.5 meters for the purpose of installing or maintaining a property boundary fence; or
- the injuring or destruction of trees that are in a hazardous condition.

3.1.2 York Region Street Tree and Forest Preservation Guidelines

The York Region Street Tree and Forest Preservation Guidelines (2022) applies to region-owned street trees and natural vegetation within the road allowance or lands owned by the region. These guidelines apply where site disturbance is proposed in the regional road allowance and specifically:

For any site disturbance proposed in the regional road allowance, the tree inventory will include;

- Region-owned Street trees or natural vegetation of any size, situated within 10 m or less of the limit of potential site disturbance, and/or;
- Existing trees greater than 10 cm DBH are situated outside the regional road allowance and within 10 m of the limit of potential site disturbance; and/or:
- Existing trees 10cm DBH and above where the site disturbance is proposed outside of the regional road allowance and Region-owned street trees or natural vegetation are situated within 10 m of the limit of potential site disturbance;
- Existing trees 10cm DBH and above where the site disturbance is proposed outside of the regional ROW and region-owned street trees are situated more than 10 m from the limit of potential site disturbance, but may be adversely impacted by the proposed site disturbance;
- Tree Management Plan that outlines recommendations for each street tree in the Study Area (e.g. replace, preserve, protect, compensation value).

Exemption

York Region Street Tree and Forest Preservation Guidelines do not apply to trees that are subject to:

— Site Disturbance wholly outside of the regional road allowance provided that region-owned street trees and/or natural vegetation will not be adversely impacted by the proposed Site Disturbance.

3.2 City of Vaughan

3.2.1 City of Vaughan Tree Protection By-law (052-2018)

The City of Vaughan's Tree Protection By-law (052-2018) regulates the planting, maintenance and removal of trees located on public and private property in the City of Vaughan with a diameter at breast height (DBH) of 20 cm or more (or a base diameter of 20 cm or more).

Trees located within 6 metres of the site boundary will be subject to protection from construction effects and must therefore be included in the tree inventory.

Exemption

— Any trees that are regulated under Regional by-law(s), such as Forest Conservation By-law, in which the provisions of the Regional by-law(s) conflict with this by-law;
— any activities or matters undertaken by the City, the Region, a school board for the development of a school, or any other government authority, conservation authority, or utility corporation;
— activities or matters undertaken under a licence issued under the Crown Forest Sustainability Act, 1994, S.O. 1994, c25;
— the Injuring or Destruction of Trees by a person licensed under the Surveyors Act, R.S.O. 1990, Chapter S.29, to engage in the practice of cadastral surveying or his or her agent, while making a survey;
— the Injuring or Destruction of Trees as a condition to the approval of a site plan, a plan of subdivision or a consent under section 41, 51 or 53, respectively, of the Planning Act, R.S.O. 1990, c. P.13, or as a requirement of a site plan agreement or subdivision

agreement entered into under those sections, or as otherwise addressed in an executed, written agreement with the City;

- the Injuring or Destruction of Trees as a condition to a development permit authorized by regulation made under section 70.2 of the Planning Act, R.S.O. 1990, c. P.13, or as a requirement of an agreement entered into under the regulation;
- the Injuring or Destruction of Trees by a transmitter or distributor, as those terms are defined in section 2 of the Electricity Act, 1998, for the purpose of constructing and maintaining a transmission system or a distribution system, as those terms are defined in that section;
- the Injuring or Destruction of Trees undertaken on land described in a licence for a pit or quarry or a permit for a wayside pit or wayside quarry issued under the Aggregate Resources Act, R.S.O. 1990, c. A.8;
- the Injuring or Destruction of Trees undertaken on land in order to lawfully establish and operate or enlarge any pit or quarry on land:
    - that has not been designated under the Aggregate Resources Act, R.S.O. 1990, c. A.8 or a predecessor of that Act, and
    - on which a pit or quarry is a permitted land use under a by-law passed under section 34 of the Planning Act, R.S.O. 1990, c. P.13.
- any Protected Trees otherwise not listed above. [Added by section 2 of By-law 060-2019 on May 1, 2019; replaced by subsection 1 of By-law 104-2020 on June 29, 2020.

3.3 Canada Food and Inspection Agency

Canada Food and Inspection Agency (CFIA) Directive D-03-08: Phytosanitary Requirements to Prevent the Introduction into and Spread within Canada of the Emerald Ash Borer, *Agrilus planipennis (Fairmaire*) applies to Ash (*Fraxinus* spp.) species observed on properties that are located within the Emerald Ash Borer (EAB) Regulated Areas of Canada, prepared by the Canada Food and Inspection Agency (CFIA) and dated February 2017. This area covers all south and central Ontario and western Quebec. Ash trees that require removal are subject to this directive.

- The CFIA restricts the movement of all Ash material including wood, bark, chips or bark chips from being transported outside of the Regulated Area. A Movement Certificate is required by the CFIA for any Ash material leaving the Regulated Area.

- Ash are permitted to be chipped on site and/or removed or cut down and removed from site. Chipped Ash material that is to remain on site must be ground or chipped to a size of less than 2.5 cm in any two dimensions. All Ash material chipped or whole that is to be removed from site must be disposed of within the Regulated Areas of Canada. Please refer to the following link to access a map showing the Emerald Ash Borer Regulated Areas of Canada
    - Refer to the CFIA website for a current map of the 'Emerald Ash Borer Regulated Areas of Canada'

3.4 Toronto and Region Conservation Authority Guidelines

The TRCA, as mandated under O. Reg. 166/06 TRCA Regulation of Development, Interference with Wetlands and Alteration to Shorelines and Watercourses, regulates and may prohibit work that may take place within a regulated area ("an area that represents the greatest physical extent of the combined hazards, plus a prescribed allowance, as set out in the Conservation Authorities Act"). This includes valley and stream corridors, wetlands and associated areas of interference and the Lake Ontario waterfront.

A parcel of land to the east of Jane Street surrounding Black Creek falls within a TRCA Regulated Area and Natural Heritage System (NHS) and is identified in Figure 1. Within this TRCA Regulated Area, 178 trees were inventoried and listed in TG01. The TRCA may be required to review this report as 178 trees within TG01 are identified for removal.

3.5 Endangered Species Act, 2007

Species designated as Threatened or Endangered by the Committee on the Status of Species at Risk in Ontario (COSSARO), otherwise known as Species at Risk (SAR) in Ontario, and their habitats (i.e., areas essential for breeding, rearing, feeding, hibernation, and migration) are automatically afforded legal protection under the Endangered Species Act, 2007 (ESA) (Government of Ontario 2007). The ESA (Subsection 9 (1)) states that:

- "No person shall,
    - kill, harm, harass, capture or take a living member of a species that is listed on the SARO List as an extirpated, endangered or threatened species;

- possess, transport, collect, buy, sell, lease, trade or offer to buy, sell, lease or trade;
  - a living or dead member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species;
  - any part of a living or dead member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species;
  - anything derived from a living or dead member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species; or
- sell, lease, trade or offer to sell, lease or trade anything that the person represents to be a thing described in subclause (b) (i), (ii) or (iii)".

— Clause 10(1) (a) of the ESA states that:

- "No person shall damage or destroy the habitat of a species that is listed on the SARO list as an endangered or threatened species".

Applicability to Project

— No woody SAR were found within the Study Area.

3.6 Migratory Birds Convention Act, 1994

Migratory Birds Convention Act, MBCA (1994) and Migratory Birds Regulations, MBR (2014) protect most species of migratory birds anywhere they are found in Canada, including surrounding ocean waters, regardless of ownership. General prohibitions under the MBCA and MBR protect migratory birds, their nests and eggs and prohibit the deposit of harmful substances in waters / areas frequented by them.

The MBR includes an additional prohibition against incidental take, defined by Environmental Canada as:

— "The inadvertent harming, killing, disturbance or destruction of migratory birds, nests and eggs."

Environment Canada implements policies and guidelines to protect migratory birds, their eggs, and their nests. There is guidance on the Environment Canada website to minimize

the risk of incidental take effects on migratory birds, achieve compliance with the law and maintain sustainable populations of migratory birds.

Compliance with the MBCA and MBR is best achieved through a due diligence approach, which identifies potential risk, based on a site-specific analysis in consideration of the Avoidance Guidelines and Best Management Practices information on the Environment Canada website.

Applicability to Project

— The MBCA and its regulations are applicable to the project. Migratory bird species subject to the MBCA may be present within the Study Area and may use various habitats on the subject property (e.g. trees, grass and other herbaceous materials, buildings). Recommended measures to reduce the possibility of contravention to the MBCA and its regulations are provided in Section 6.5.

4 Field Surveys

4.1 Tree Inventory Methodology

A tree inventory within the Study Area was conducted on October 28 and November 4, 2021.

Trees were inventoried as follows:

- Tree tag number; Tree species (common and scientific names – genus and species); DBH; Tree condition (trunk integrity, canopy structure, canopy vigour); Evidence of insect or fungal infection; General comments including structural integrity, significant lean, etc.
- Tree location was identified using a combination of aerial photography and GPS coordinate mapping.
- Representative photos were taken for inventoried trees and shown in Appendix C.
- Trees were assessed in accordance with the Region of York and City of Vaughan By-laws;
- Trees with a canopy that overlap, in close proximity or clusters of the same species were assessed as a grouping using an alphanumeric identifier e.g. TG01;
- Trees in accessible locations were tagged using aluminum numbered tags affixed to the tree, e.g. 209; and,
- Trees that were out of reach or on an adjacent property were not tagged, but were given an alphabetic or alphanumeric label and located on the plans e.g. P01.

4.2 Tree Inventory Results

A total of 333 trees were inventoried and assessed as part of this report:

- 149 individual trees
    - Tree numbers 209 to 337, P01 to P20
- 184 trees in 2 tree groups
    - TG01 to TG02

Of the 333 trees, 274 (82%) have a DBH of <20 cm, and 59 (18%) have a DBH or diameter at base height of ≥ 20 cm.

Inventoried trees are located within the Site Boundary (Figure 1). Based on field data provided, some trees may not be identified within the 6 m buffer on the northwest side of the intersection of Interchange Way and Jane Street.

Property ownership for inventoried trees is represented in Table 2 and in Appendix A.

Table 2. Tree Locations for Inventoried Trees

Location	Tree IDs	Total
York Region	TG01	178
City of Vaughan	209-337, P01-P20, TG02	155
Total		333

4.2.1 York Region Property

— Mixture of native and non-native species.

Species composition was as follows:

— Abundant
  - o *Acer negundo* (Manitoba Maple)
  - o *Rhamnus cathartica* (Common Buckthorn)

— Occasional
  - o *Fraxinus pennsylvanica* (Green Ash)

— Less frequent
  - o *Eleagnus angustifolia* (Russian Olive)
  - o *Salix* x *fragilis* (Crack Willow)
  - o *Prunus serotina* (Black Cherry)
  - o *Crataegus* sp. (Hawthorn species)
  - o *Populus* x *canadensis* (Canada Poplar)

4.2.2 City of Vaughan Property

— Mixture of native and non-native species.
— Tree diameters ranged from 5 cm to 31 cm DBH with most trees between 10 cm and 20 cm DBH.

Species composition was as follows:

— Abundant
    - *Acer platanoides* (Norway Maple)
    - *Picea pungens* (Blue Spruce)
    - *Acer rubrum* (Red Maple)
— Frequent
    - *Tilia cordata* (Little-leaf Linden)
    - *Ulmus* 'Morton' (Accolade Elm)
    - *Acer saccharinum* (Silver Maple)
— Occasional
    - *Picea glauca* (White Spruce)
    - *Picea abies* (Norway Spruce)
    - *Gleditsia triacanthos* (Honey Locust)
    - *Acer campestre* (Hedge Maple)
    - *Thuja occidentalis* 'Smaragd' (Emerald Green Cedar
    - *Syringa reticulate* 'Ivory Silk' (Ivory Silk Lilac)
— Less frequent
    - *Pyrus* sp. (Pear species)
    - *Quercus palustris* (Pin Oak)

5 Discussion

This section is a discussion of the retention potential, preservation and / or impacts to trees within the limits of the Study Area. Vegetation recommendations, impacts and preservation are detailed in the following sections.

5.1 Proposed Works

Proposed works include the widening of Interchange Way from two to four lanes, extension of Interchange Way east of Jane Street to Credit Stone Road, and the construction of a new Millway Avenue extension from north of Interchange Way to south of Highway 7. Millway Avenue will be classified as a Special Collector Road, serving as a mobility hub with adjacent retail, commercial, transit, high-density residential, and public spaces. Interchange Way will be classified as a Major Collector Road, with multi-modal transportation prioritized through the accommodation of transit and pedestrian/cycling infrastructure.

The improvements will include the following features:

- Widening of the Interchange Way from two to four lanes with a center median barrier.
- New 2-meter-wide raised cycle tracks on both sides along Interchange Way and Millway Avenue.
- Decorative paving at intersections at both Interchange Way and Millway Avenue.
- Re-alignment of Black Creek and new Interchange Way overpass, completed under a separate project (Black Creek Renewal Project).
- Drainage and stormwater management improvements including potential Low Impact Development (LID) measures.
- Illumination improvements and relocation of impacted utilities.
- Potential for decorative paving at intersections and transit stops, to respect broader VMC character.

5.2 Tree Recommendations / Assumptions

The design and proposed works have been proposed as part of 30% design drawings prepared by WSP Canada Inc.

The following recommendations / assumptions apply to trees that are to be removed, injured, preserved, retained and or transplanted.

5.2.1 Tree Removal

Tree removal is based on the degree of excavation / disturbance within the Tree Protection Zone (TPZ) considering: tree species, size, condition and the amount of critical roots that would be impacted that are vital to sustaining the trees overall health and stability. This amount of impact and above is likely to cause a significant and irreversible decline in health of the tree.

— This designation also may be applied to trees that are dead, in poor condition or trees that could pose future safety concerns and trees dying because of a disease or insect infestation.

5.2.2 Tree Preservation Zone Encroachment / Reduction

Where proposed works will encroach into a TPZ, a reduction will be required;

— Where reductions are significant, mitigative measures may be recommended to minimize damage to roots and canopy.

5.2.3 Tree Preservation

Preservation of trees is considered where an encroachment, excavation or disturbance into the TPZ is expected to be minor or nil and that tree health and stability will not be adversely impacted;

— The implementation of mitigation measures will reduce potential impacts to the tree therefore allowing for the tree to be preserved e.g. air spade excavation and / or horizontal root protection.

5.2.4 Tree Retention

Proposed works will occur beyond the TPZ and the dripline with no impacts to the tree. Trees can be retained and do not require tree protection hoarding.

5.2.5 Tree Transplanting

Deemed to be within the limit of work, in good condition and typically under 30 cm DBH. Transplanting of trees is dependent on available space on site.

5.3 Tree Removals

Impacts to trees will occur where trees are located within the limits of proposed works.

Refer to Table 3 which summarizes all trees proposed for removal, TPZ encroachment, and preservations by by-law relevance, tree ID, rationale and quantity.

Table 3. Tree Impact Summary

By-law	Tree ID	Rationale	# of Removals	# of TPZ Encroachments	# of Preserve
York Region Forest Conservation By-law (2013-68)	N/A	N/A	0	0	0
York Region Street Tree and Forest Preservation Guidelines	N/A	N/A	0	0	0
City of Vaughan Tree Protection By-law (052-2018)	N/A	N/A	0	0	0
Not subject to By-laws	209-331, 336, 337, P20*, TG01, TG02	Roadway Extension Construction	333	0	0
Total			333	0	0

* Trees with ID numbers P01-P19 and 332-335 were not included as they have been removed since the inventory was completed.

5.4 Tree Preservation Zone Encroachment / Reduction

No trees are proposed for Preservation Zone Encroachment/Reduction as shown in Table 3.

5.5 Tree Preservation

No trees are proposed for tree preservation as shown in Table 3.

6 Mitigation Measures

The survival rates for trees, which are in proximity to construction, are dependent on the resultant changes to a variety of environmental and anthropogenic factors. These construction activities bring about changes to a variety of environmental features such as the existing microclimate that includes winds, air temperature, soil moisture, amount of available sunlight, soil quality, and the level of the water table. Increased human activities may also damage the structure and/or physiological activities of the trees. The full effects of any damage that occurs may not appear until several years after its occurrence. Thus, it is essential that both vegetative clearing and preservation methods follow the guidelines below and those generally accepted as keeping with good horticultural and construction practices. The guidelines are subject to adjustments deemed reasonable and appropriate considering the proximity and number of trees involved and the site-specific servicing requirements.

6.1 General Mitigation Measures

The following is a list of practical considerations for the construction phase of the project that applies to all trees that may be impacted by the construction:

- Development Engineering (VMC) shall notify Vaughan Forestry once the Tree Protection (Hoarding) has been installed, to allow Vaughan Forestry to inspect and approve according to By-law 052-2018 and/or in accordance with the City of Vaughan's Tree Protection Protocol (2018).
- The tree protection fencing will be maintained until all construction is completed, soils are stabilized, and all the equipment has been removed from the site.
- To minimize damage to roots it is recommended that excavators scrape soil within the same direction of the roots and not across. Any roots exposed are too be pruned neatly and cleanly;
- Areas where excavation, grading and construction have compacted soil within a reduced TPZ, at the completion of construction, scarify soil to a depth of 100 millimetres (mm). Restore disturbed areas and apply the following methods below:
    - Water trees periodically during construction; and

- After construction apply a 75mm deep layer of mulch in a 2m radius around the tree's trunk.

— Prior to the commencement of tree removals, all limits of the locations of the tree preservation fencing must be clearly staked in the field, installed per approved plans, and approved by the contract administrator. All trees within the tree preservation zone must be left standing. The tree removals must be coordinated in accordance and compliance with the Migratory Bird Convention Act (MBCA).
— All removals must be felled into the work area to ensure that damage does not occur to the trees within the tree preservation zone.
— Upon completion of the tree removals, all felled trees are to be removed from the site, and all should be brush chipped. All brush, roots and wood debris must be shredded into pieces that are smaller than 25 mm in size to ensure that any insect pests that could be present within the wood are destroyed.
— The Canadian Food and Inspection Agency (CFIA) has issued a prohibition of movement where the Emerald Ash Borer (EAB) has been confirmed. EAB has been found within the Region of York and it is within the EAB Regulated Area. This directive pertains to the movement of regulated materials (including but not limited to ash wood or bark and ash wood chips or bark chips) from a regulated area. EAB regulated articles moving out of a regulated area must be accompanied by a Movement Certificate issued by the CFIA. Refer to the EAB Regulated Areas of Canada found on the CFIA website.
— Ash materials may be removed from the site and disposed of within the 'Regulated Area' (see CFIA website for the 'Regulated Area' limits). Should it be necessary to dispose of Ash products outside of the 'Regulated Area' a 'Movement Certificate' will be required from the CFIA prior to transport.
— Tree protection fencing must be constructed and installed as per the details on the approved Tree Preservation Plan. Upon installation of the fencing, the contractor will contact the contract administrator to review and approve the fencing and its location prior to commencement of any grading work.
— Areas within the TPZ are not to be used for any type of storage (e.g. storage of debris, construction material, surplus soils, and construction equipment). No trenching or tunneling for underground services shall be located within the tree protection zone or dripline of trees designated for preservation within or adjacent to the construction zone.
— No grade changes shall occur within the TPZ unless approved as part of this report. If any grade changes may occur, either as a cut or fill situation, the consulting arborist

must be notified prior to such work occurring to ensure that all precautions to preserve the tree are made.

— Trees shall not have any rigging cables or hardware of any sort attached or wrapped around them, nor shall any contaminants be dumped within the protective areas. Further, no contaminants shall be dumped or flushed where they may come into contact with the feeder roots of the trees.

— If it is necessary to remove additional limbs or portions of trees after construction has commenced, in order to accommodate the construction, the consulting arborist is to be informed and under their direction the removal is to be executed carefully and in full accordance with arboricultural techniques, by a certified arborist.

6.2 Root Pruning Practices

— All approved root pruning is to take place by or under the supervision of an arborist and in accordance good arboricultural practices.

— Pruned root ends shall be neatly and squarely trimmed and the area shall be backfilled with clean native fill as soon as possible to prevent desiccation and promote root growth.

— The exposed roots shall not be allowed to dry out and an appropriate watering schedule shall be undertaken (e.g. water bi-weekly to field capacity between June 1st and September 15th so that the roots maintain optimum soil moisture during construction and backfilling operations.

— Backfilling shall occur immediately and shall be with clean uncontaminated topsoil from an approved source. It is recommended that texture of backfill be coarser than existing soils, and that backfill comes into clean contact with existing soils, i.e. remove air pockets, sod, etc.

— Pruning to be conducted by an International Society of Arboriculture (ISA) certified Arborist.

6.3 Branch Pruning Practices

— All limbs damaged or broken during construction should be pruned cleanly, utilizing by-pass secateurs in accordance with approved horticultural practices. Should there be a potential risk of transfer of disease from infected to non-infected trees, tools must be disinfected after pruning each tree by dipping in methyl hydrate. This practice is

particularly important during periods of tree stress and when pruning many members of the same genera, within which a disease could be spread quickly (i.e., Verticillium Wilt on Maples or Fireblight on genera of the Rosaceae family).

- All pruning cuts should be made to a growing point such as a bud, twig or branch, cut just outside the branch collar (the swollen area at the base of the branch that sometimes has a bark ridge), and perpendicular to the branch being pruned rather than as close to the trunk as possible. This minimizes the site of the wound. No stubs should be left. Poor cut location, poor cut angle and torn cuts are not acceptable.
- Extensive pruning is best completed before plants break dormancy. Pruning should be limited to the removal of no more than 25% of the total bud and leaf bearing branches. Pruning should include the careful removal of:
    - Deadwood;
    - branches that are weak, damaged, diseased and those which will interfere with construction activity;
    - secondary leaders of conifers;
    - trunk and root suckers;
    - trunk waterspouts; and,
    - tight V-shaped or weak crotches (included unions).
- Any branches that overhang the work area and require pruning are to be pruned using good arboricultural practices utilizing by-pass secateurs in accordance with approved horticultural practices and/or American National Standard (ANSI) A300 (Part 1) – 2008 Pruning.
- The Contractor must report immediately any damage to trees such as broken limbs, damage to roots, or wounds to the main trunk or stem systems so that the damage can be assessed immediately.
- Pruning to be conducted by an ISA Certified Arborist.

6.4 Construction Implementation

Pre-Construction:

- A site meeting will be held with Contractor and Contract Administrator to review the clearing limits and confirm the installation location for the temporary tree protection fence;

Tree removal along the tree retention limit must be carefully felled away from the tree retention limit and into the construction / development area. Stumps adjacent to trees identified for retention are to be flush cut and not chipped or grubbed to avoid impacts to retained trees.

Construction:

- Periodic inspections will be undertaken by the site supervisor to ensure that the mitigation measures are being maintained during construction;
- The temporary protection fence is to be maintained throughout the entire construction period. No equipment storage, flushing of fuel, washing of construction equipment, and storage of spoil or construction debris is to occur behind the temporary protection fence;
- To avoid root zone impacts on trees to be retained, excavated material will not be stored against the tree protection barrier.

Post-Construction:

- The temporary protection fence will be removed last after all the construction has ended, soils are stabilized, and all the equipment has been removed.

6.5 Migratory Bird Protection

To reduce the possibility of contravention of the MBCA, vegetation removal should be scheduled to occur outside of the overall bird nesting season of March 31 to August 31. Some birds may nest before and after this peak bird nesting season due to annual seasonal fluctuations. If a nest of a migratory bird is found within the construction area outside of this nesting period it still receives protection.

If vegetation must be removed during the overall bird nesting season:

- Nest and nesting activity searches will be conducted in areas of simple habitat by a qualified avian biologist no more than 24 hours prior to vegetation removal. For examples of simple and complex habitat please refer to the Environment and Climate Change Canada's Guidelines to Reduce Risk to Migratory Birds (ECCC 2019). Nesting

activity will be documented when it consists of confirmed breeding evidence, as defined by OBBA criteria (Cadman 2009).

— If an active nest or confirmed nesting activity of a migratory bird is observed in simple habitat, regardless of the timing window recommended, a species-specific buffer area following ECCC guidelines will be applied to the nest or confirmed nesting activity wherein no vegetation removal will be permitted until the young have fledged from the nest. The radius of the buffer will depend on species, level of disturbance and landscape context (ECCC 2019), which will be confirmed by a qualified avian biologist, but will protect a minimum of 10 m around the nest or nesting activity.
— The results of all nest searches will be documented at the end of each survey day in a Technical Memorandum, including information on the searcher, date, time conducted, weather conditions, habitat type, vegetation community type, observations of breeding activity, observations of confirmed nests including co-ordinates, and, if required, the buffer applied to identified breeding/nesting sites.

If vegetation removal must occur in complex habitats within the above-listed timing windows and absolutely cannot be avoided, the same Best Management Practices (BMPs) such as nest and nesting activity searches described above will be undertaken.

6.6 Horizontal Root Protection

Where limits of work will encroach into the TPZ of existing trees and will require a reduction, horizontal root protection is recommended to be applied to minimize potential root damage.

7 Tree Removals / Injury / Compensation

7.1.1 Region of York Compensation

- Replacement is based on size and condition of existing trees, and which has been determined through the Region's compensation formula as explained in Table 4 and Table 5. Should the amount of compensation required not be achievable within the project limits than cash in lieu (amount determined by the Region) may be made payable to the Region prior to site plan approval.
- The replacement cost for a given street tree is based on the Region's cost for planting a tree and maintaining it in good condition and under warranty for 3 years. The size of replacement tree plantings is 50 mm (5 cm) caliper.
- Certain tree species are exempt from compensation Guidelines. Exempt trees include: Tree-of-Heaven (*Ailanthus altissima*), European/Black Alder (*Alnus glutinosa*), Russian Olive (*Elaeagnus angustifolia*), any tree of the genus Ash (*Fraxinus* sp.) not under an EAB treatment program, and any tree of the genus Buckthorn (*Rhamnus* sp.).

Region of York Compensation Formulas

The number of replacement trees is determined through the following formula:

$$Number\ of\ relacement\ trees = \left(\left(\frac{DBH\ of\ tree\ to\ be\ removed}{Replacement\ Tree\ Caliper\ Size}\right) * Condition\ rating\right)$$

Table 4. Compensation Formula - Replacement Trees Example

Tree ID	DBH of Tree Removed	Replacement Tree Caliper Size	Condition Rating	Replacement Trees
001	20	5	100	4

The compensation value is calculated as follows:

$$Compensation\ Value\ (\$) = (Number\ of\ replacement\ trees) * Replacement\ Cost$$

Table 5. Compensation Formula - Value (Example)

# of Replacement Trees	Replacement Cost	Value
4	$827.00	$3,308.00

Compensation to Region of York

No compensation to the Region of York is required as all trees to be removed are exempt from the Regional By-laws.

7.1.2 City of Vaughan Compensation

- Compensation is required for the removal of trees >20 cm DBH that are subject to the Private Tree By-Law. Refer to the following City standard compensation ratios and compensation table.
- Replacement trees are recommended to be planted where possible within the road allowance where trees were removed or in other areas where there is available space for tree planting.
- The City has noted for any one subject area, Vaughan Forestry recommends planting no more than 10% of the same genus and no more than 4 of the same species together. This encourages diversity in our urban canopy and prevents the planting of monocultures. Due to their overrepresentation in the urban canopy, it is recommended that new plantings contain no more than 2% of the following genera: Acer, Gleditsia, and Tilia.

Replacement trees are based on the following criteria:

- 1:1 replacement ratio (Recommended) for City trees;
- City of Vaughan Replacement trees:
  - 1 tree for each tree that is 20 to 30 cm DBH;
  - 2 trees for each tree that is 31 to 40 cm DBH;
  - 3 trees for each tree that is 41 to 50 cm DBH:
  - 4 trees for each tree that is 50 cm or greater
- Cash-in-lieu of planting for a tree on private property

Compensation to the City of Vaughan

Compensation amounts will be calculated upon update of the Arborist Report pending detailed design of the project.

7.2 Overall Compensation Notes

Replacement trees will be calculated when detailed design is available.

8 Conclusion

A majority of vegetation found on site is immature to semi-mature and characterized by native and non-native deciduous and coniferous trees, the majority of which have been planted.

All inventoried trees within the subject property will require removal to accommodate the proposed road improvements and expansion. Most of the trees in the area are located within the right-of-way.

9 Literature Cited

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10 Limitations

It is our policy to attach the following clause regarding limitations. We do this to ensure that the client is aware of what is technically and professionally realistic in retaining trees.

The assessment of the trees presented in this report has been made using accepted arboricultural techniques. These include a visual examination of all the above ground parts of the tree for structural defects, scars, external indications of decay such as fungal fruiting bodies, evidence of attack by insects, discoloured foliage, the condition of any visible root structures, the degree and direction of lean (if any), the general condition of the trees and the surrounding site, and the proximity of property and people. Except where specifically noted, the trees were not cored, probed or climbed and there was no detailed inspection of the root crowns involving excavations.

Notwithstanding the recommendations and conclusions made in this report, it must be recognized that trees are living organisms, and their health and vigour constantly change over time. They are not immune to changes in site conditions or seasonal variations in the weather conditions.

While reasonable efforts have been made to ensure that the subject trees are healthy, no guarantees are offered, or implied, that these trees or any of their parts will remain standing. It is both professionally and practically impossible to predict with absolute certainty the behaviour of any single tree or its component parts under all circumstances. Inevitably, a standing tree will always pose some level of risk. Most trees have the potential for failure under adverse weather conditions, and the risk can only be eliminated if the tree is removed.

Appendix A: Tree Inventory and Preservation Table

Project: Vaughan Metropolitan Centre **Field Work Completed By:** Carlene Perkin & Carly Van Daele

Dates of Field Work: October 28 & November 4, 2021 **Weather:** 10C, overcast, gusty wind, no precip; 7C, overcast, low wind, no precip

Tree Condition Assessment Criteria:
TI - Trunk Integrity: assessment of the trunk for any defects or weaknesses.
CS - Canopy Structure: assessment of scaffold branches, unions and canopy
CV - Canopy vigour: assessment of the health of the tree, based on the % of deadwood, disease, pests & live crown

Tree Condition:
Good (G): tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI,CS,CV)
Fair (F): tree displays 15-40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)
Poor (P): tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)

Legend:
Trees to be Retained
Trees to be Preserved
Trees to be Removed
Tree location / grouping
Minimum TPZ reduction / Injury
Minimum TPZ reduction / No Injury

Photo #	Health / Condition	Tree #	Code	Botanical Name	Common Name	Qty.	DBH (cm)	Effective DBH (cm)	Trunk Integrity	Canopy Structure	Canopy Vigour	Dripline Radius (m)	Height (m)	Tree Location / Applicable By-law	Recommendations	Permits Required	Tree Protection Zone (m)
4866	Good	209	Pyru_sp	*Pyrus sp.*	*Pear sp.*	1	7	7	G	G	G	0.5	4	City of Vaughan Tree Protection By-law	Remove	No	1.2
4867	Fair	210	Picepun	*Picea pungens*	*Blue Spruce*	1	17	17	G	G	G	1	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4869	Good	211		*Ulmus 'Morton'*	*Accolade Elm*	1	17	17	G	G	G	3	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4871	Good	212	Acerrub	*Acer rubrum*	*Red Maple*	1	6	6	G	G	G	1	6	City of Vaughan Tree Protection By-law	Remove	No	1.2
4872	Good	213	Acerrub	*Acer rubrum*	*Red Maple*	1	7	7	G	G	G	0.5	5	City of Vaughan Tree Protection By-law	Remove	No	1.2
4873	Good	214	Acerrub	*Acer rubrum*	*Red Maple*	1	11	11	G	G	G	1	5	City of Vaughan Tree Protection By-law	Remove	No	1.8
4874	Good	215	Acerrub	*Acer rubrum*	*Red Maple*	1	6	6	G	G	G	1	5	City of Vaughan Tree Protection By-law	Remove	No	1.2
No Photo	Good	216	Acerrub	*Acer rubrum*	*Red Maple*	1	7	7	G	G	G	1	5	City of Vaughan Tree Protection By-law	Remove	No	1.2
4876	Poor	217	Acerrub	*Acer rubrum*	*Red Maple*	1	8	8	G	G	P	1	5	City of Vaughan Tree Protection By-law	Remove	No	1.2
4877	Good	218		*Ulmus 'Morton'*	*Accolade Elm*	1	16	16	G	G	G	3	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4878	Good	219		*Ulmus 'Morton'*	*Accolade Elm*	1	12	12	G	G	G	2	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4879	Good	220		*Ulmus 'Morton'*	*Accolade Elm*	1	14	14	G	G	G	3	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4880	Fair	221		*Ulmus 'Morton'*	*Accolade Elm*	1	17	17	G	F	F	3	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4881	Good	222		*Ulmus 'Morton'*	*Accolade Elm*	1	16	16	G	G	G	3	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4884	Good	223		*Ulmus 'Morton'*	*Accolade Elm*	1	24	24	G	G	G	4	7	City of Vaughan Tree Protection By-law	Remove	No	1.8
4885	Good	224	Picepun	*Picea pungens*	*Blue Spruce*	1	22	22	G	G	G	2.5	10	City of Vaughan Tree Protection By-law	Remove	No	1.8
4883	Good	225	Picegla	*Picea glauca*	*White Spruce*	1	10	10	G	G	G	2	5	City of Vaughan Tree Protection By-law	Remove	No	1.8
4886	Fair	226	Picegla	*Picea glauca*	*White Spruce*	1	7	7	G	F	F	1	5	City of Vaughan Tree Protection By-law	Remove	No	1.2
4887	Good	227	Picepun	*Picea pungens*	*Blue Spruce*	1	16	16	G	G	G	2	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
No Photo	Good	228	Picepun	*Picea pungens*	*Blue Spruce*	1	31	31	G	G	G	2	10	City of Vaughan Tree Protection By-law	Remove	No	2.4
No Photo	Good	229	Picepun	*Picea pungens*	*Blue Spruce*	1	21	21	G	G	G	2	10	City of Vaughan Tree Protection By-law	Remove	No	1.8
4888	Dead	230	Acerrub	*Acer rubrum*	*Red Maple*	1	6	6	G	G	P	0	7	City of Vaughan Tree Protection By-law	Remove	No	1.2
4889	Good	231	Acerrub	*Acer rubrum*	*Red Maple*	1	6	6	G	G	G	1	7	City of Vaughan Tree Protection By-law	Remove	No	1.2
4890	Dead	232	Acerrub	*Acer rubrum*	*Red Maple*	1	8	8	G	G	P	1	8	City of Vaughan Tree Protection By-law	Remove	No	1.2
4891	Fair	233	Acerrub	*Acer rubrum*	*Red Maple*	1	6	6	G	G	F	0.5	10	City of Vaughan Tree Protection By-law	Remove	No	1.2

Project: Vaughan Metropolitan Centre **Field Work Completed By:** Carlene Perkin & Carly Van Daele

Dates of Field Work: October 28 & November 4, 2021 **Weather:** 10C, overcast, gusty wind, no precip; 7C, overcast, low wind, no precip

Tree Condition Assessment Criteria:
TI - Trunk Integrity: assessment of the trunk for any defects or weaknesses.
CS - Canopy Structure: assessment of scaffold branches, unions and canopy
CV - Canopy vigour: assessment of the health of the tree, based on the % of deadwood, disease, pests & live crown

Tree Condition:
Good (G): tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI,CS,CV)
Fair (F): tree displays 15-40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)
Poor (P): tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)

Legend:
Trees to be Retained
Trees to be Preserved
Trees to be Removed
Tree location / grouping
Minimum TPZ reduction / Injury
Minimum TPZ reduction / No Injury

Photo #	Health / Condition	Tree #	Code	Botanical Name	Common Name	Qty.	DBH (cm)	Effective DBH (cm)	Trunk Integrity	Canopy Structure	Canopy Vigour	Dripline Radius (m)	Height (m)	Tree Location / Applicable By-law	Recommendations	Permits Required	Tree Protection Zone (m)
4892	Poor	234		*Ulmus 'Morton'*	*Accolade Elm*	1	13	13	G	F	P	3	5	City of Vaughan Tree Protection By-law	Remove	No	1.8
4893	Poor	235		*Ulmus 'Morton'*	*Accolade Elm*	1	10	10	G	F	P	2	5	City of Vaughan Tree Protection By-law	Remove	No	1.8
4894	Fair	236		*Ulmus 'Morton'*	*Accolade Elm*	1	13	13	G	F	F	3	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4894	Good	237		*Ulmus 'Morton'*	*Accolade Elm*	1	12	12	G	G	G	3	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4895	Poor	238	Acerrub	*Acer rubrum*	*Red Maple*	1	13	13	G	G	P	2.5	7	City of Vaughan Tree Protection By-law	Remove	No	1.8
4896	Good	239	Acerrub	*Acer rubrum*	*Red Maple*	1	6	6	G	G	G	1	8	City of Vaughan Tree Protection By-law	Remove	No	1.2
4897	Poor	240	Acerrub	*Acer rubrum*	*Red Maple*	1	12	12	G	G	P	2	7	City of Vaughan Tree Protection By-law	Remove	No	1.8
4898	Good	241	Acerrub	*Acer rubrum*	*Red Maple*	1	15	15	G	G	F	2	10	City of Vaughan Tree Protection By-law	Remove	No	1.8
4899	Good	242	Acerrub	*Acer rubrum*	*Red Maple*	1	21	21	G	G	G	2	10	City of Vaughan Tree Protection By-law	Remove	No	1.8
4900	Fair	243	Acerpla	*Acer platanoides*	*Norway Maple*	1	22	22	F	G	F	3	10	City of Vaughan Tree Protection By-law	Remove	No	1.8
4901	Poor	244	Acerpla	*Acer platanoides*	*Norway Maple*	1	16	16	G	F	F	2.5	7	City of Vaughan Tree Protection By-law	Remove	No	1.8
4902	Poor	245	Querrub	*Quercus rubra*	*Northern Red Oak*	1	5	5	F	G	P	0.5	5	City of Vaughan Tree Protection By-law	Remove	No	1.2
4903	Fair	246	Acerpla	*Acer platanoides*	*Norway Maple*	1	18	18	F	G	F	2	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4904	Fair	247	Acerpla	*Acer platanoides*	*Norway Maple*	1	15	15	F	G	F	1.5	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4905	Fair	248	Acerpla	*Acer platanoides*	*Norway Maple*	1	17	17	P	P	P	2	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4907	Good	249	Acerpla	*Acer platanoides*	*Norway Maple*	1	26	26	F	F	G	3	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4906	Fair	250	Acerpla	*Acer platanoides*	*Norway Maple*	1	16	16	P	F	F	2	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4908	Poor	251	Acerpla	*Acer platanoides*	*Norway Maple*	1	16	16	F	G	G	2	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4908	Fair	252	Acerpla	*Acer platanoides*	*Norway Maple*	1	18	18	F	F	F	2	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4808	Good	253	Acerpla	*Acer platanoides*	*Norway Maple*	1	25	25	G	G	G	2	7	City of Vaughan Tree Protection By-law	Remove	No	1.8
4914	Good	254	Acerpla	*Acer platanoides*	*Norway Maple*	1	27	27	G	G	G	3	10	City of Vaughan Tree Protection By-law	Remove	No	1.8
4915	Poor	255	Acerpla	*Acer platanoides*	*Norway Maple*	1	18	18	F	G	P	3	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4916	Fair	256	Acerpla	*Acer platanoides*	*Norway Maple*	1	20	20	F	G	F	3	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4917	Good	257	Acerpla	*Acer platanoides*	*Norway Maple*	1	22	22	F	G	G	3	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4918	Good	258	Acerpla	*Acer platanoides*	*Norway Maple*	1	22	22	F	G	G	2.5	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4919	Good	259	Acerpla	*Acer platanoides*	*Norway Maple*	1	25	25	F	G	G	2.5	6	City of Vaughan Tree Protection By-law	Remove	No	1.8

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Good (G): tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI,CS,CV)
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Legend:
Trees to be Retained
Trees to be Preserved
Trees to be Removed
Tree location / grouping
Minimum TPZ reduction / Injury
Minimum TPZ reduction / No Injury

Photo #	Health / Condition	Tree #	Code	Botanical Name	Common Name	Qty.	DBH (cm)	Effective DBH (cm)	Trunk Integrity	Canopy Structure	Canopy Vigour	Dripline Radius (m)	Height (m)	Tree Location / Applicable By-law	Recommendations	Permits Required	Tree Protection Zone (m)
4920	Good	260	Acerpla	*Acer platanoides*	*Norway Maple*	1	24	24	F	G	G	2.5	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4921	Fair	261	Acerpla	*Acer platanoides*	*Norway Maple*	1	23	23	F	G	G	2.5	5	City of Vaughan Tree Protection By-law	Remove	No	1.8
4922	Good	262	Querpal	*Quercus palustris*	*Pin Oak*	1	20	20	G	G	G	3	12	City of Vaughan Tree Protection By-law	Remove	No	1.8
4923	Good	263	Querpal	*Quercus palustris*	*Pin Oak*	1	17	17	G	G	G	3	12	City of Vaughan Tree Protection By-law	Remove	No	1.8
4924	Good	264	Picepun	*Picea pungens*	*Blue Spruce*	1	16	16	G	G	G	2	10	City of Vaughan Tree Protection By-law	Remove	No	1.8
4925	Good	265	Tilicor	*Tilia cordata*	*Little-leaf Linden*	1	18	18	G	G	G	3	10	City of Vaughan Tree Protection By-law	Remove	No	1.8
4926	Fair	266	Acerpla	*Acer platanoides*	*Norway Maple*	1	15	15	F	G	G	1.5	5	City of Vaughan Tree Protection By-law	Remove	No	1.8
4927	Fair	267	Acerpla	*Acer platanoides*	*Norway Maple*	1	15	15	F	G	G	1.5	5	City of Vaughan Tree Protection By-law	Remove	No	1.8
4928	Good	268	Acerrub	*Acer rubrum*	*Red Maple*	1	6	6	G	G	G	2	6	City of Vaughan Tree Protection By-law	Remove	No	1.2
4929	Good	269	Acerrub	*Acer rubrum*	*Red Maple*	1	7	7	G	G	G	1	6	City of Vaughan Tree Protection By-law	Remove	No	1.2
4929	Good	270	Acerrub	*Acer rubrum*	*Red Maple*	1	6	6	G	G	G	1	6	City of Vaughan Tree Protection By-law	Remove	No	1.2
No Photo	Good	271	Acerrub	*Acer rubrum*	*Red Maple*	1	6	6	G	G	G	1	6	City of Vaughan Tree Protection By-law	Remove	No	1.2
4930	Good	272	Querrub	*Quercus rubra*	*Northern Red Oak*	1	12	12	G	G	G	3	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4931	Good	273	Querrub	*Quercus rubra*	*Northern Red Oak*	1	10	10	G	G	G	3	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4931	Fair	274	Querrub	*Quercus rubra*	*Northern Red Oak*	1	11	11	F	G	G	3	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4932	Good	275	Picepun	*Picea pungens*	*Blue Spruce*	1	13	13	G	G	G	1.5	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4932	Good	276	Picepun	*Picea pungens*	*Blue Spruce*	1	15	15	G	G	G	1.5	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4933	Good	277	Tilicor	*Tilia cordata*	*Little-leaf Linden*	1	17	17	G	G	G	3	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4934	Good	278	piceabi	*Picea abies*	*Norway Spruce*	1	13	13	G	G	G	2	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4934	Fair	279	piceabi	*Picea abies*	*Norway Spruce*	1	11	11	G	G	F	2	7	City of Vaughan Tree Protection By-law	Remove	No	1.8
4934	Good	280	piceabi	*Picea abies*	*Norway Spruce*	1	12	12	G	G	G	2	7	City of Vaughan Tree Protection By-law	Remove	No	1.8
4935	Good	281	Tilicor	*Tilia cordata*	*Little-leaf Linden*	1	11	11	G	G	G	2	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4935	Good	282	Tilicor	*Tilia cordata*	*Little-leaf Linden*	1	15	15	G	G	G	3	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4936	Good	283	Acerpla	*Acer platanoides*	*Norway Maple*	1	18	18	G	G	G	3	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4937	Fair	284	Acerpla	*Acer platanoides*	*Norway Maple*	1	13	13	P	G	G	2	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4938	Good	285	Picepun	*Picea pungens*	*Blue Spruce*	1	14	14	G	G	G	2	10	City of Vaughan Tree Protection By-law	Remove	No	1.8

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Legend:
Trees to be Retained
Trees to be Preserved
Trees to be Removed
Tree location / grouping
Minimum TPZ reduction / Injury
Minimum TPZ reduction / No Injury

Photo #	Health / Condition	Tree #	Code	Botanical Name	Common Name	Qty.	DBH (cm)	Effective DBH (cm)	Trunk Integrity	Canopy Structure	Canopy Vigour	Dripline Radius (m)	Height (m)	Tree Location / Applicable By-law	Recommendations	Permits Required	Tree Protection Zone (m)
4939	Good	286	Picepun	*Picea pungens*	*Blue Spruce*	1	15	15	G	G	G	2	10	City of Vaughan Tree Protection By-law	Remove	No	1.8
4939	Poor	287	Picepun	*Picea pungens*	*Blue Spruce*	1	15	15	G	G	P	1	9	City of Vaughan Tree Protection By-law	Remove	No	1.8
4940	Good	288	Tilicor	*Tilia cordata*	*Little-leaf Linden*	1	13	13	G	G	G	2.5	5	City of Vaughan Tree Protection By-law	Remove	No	1.8
4942	Good	289	piceabi	*Picea abies*	*Norway Spruce*	1	15	15	G	G	G	3	10	City of Vaughan Tree Protection By-law	Remove	No	1.8
4943	Good	290	Picepun	*Picea pungens*	*Blue Spruce*	1	6	6	G	G	G	1	4	City of Vaughan Tree Protection By-law	Remove	No	1.2
4944	Good	291		*Syringa reticulata 'Ivory Silk'*	*Ivory Silk Lilac*	1	7	7	G	G	G	1	5	City of Vaughan Tree Protection By-law	Remove	No	1.2
4944	Good	292		*Syringa reticulata 'Ivory Silk'*	*Ivory Silk Lilac*	1	9	9	G	G	G	1	5	City of Vaughan Tree Protection By-law	Remove	No	1.2
4944	Good	293		*Syringa reticulata 'Ivory Silk'*	*Ivory Silk Lilac*	1	6	6	G	G	G	1	5	City of Vaughan Tree Protection By-law	Remove	No	1.2
4966	Good	294		*Syringa reticulata 'Ivory Silk'*	*Ivory Silk Lilac*	1	7	7	G	G	G	1	5	City of Vaughan Tree Protection By-law	Remove	No	1.2
4967	Good	295		*Syringa reticulata 'Ivory Silk'*	*Ivory Silk Lilac*	1	8	8	G	G	G	1	5	City of Vaughan Tree Protection By-law	Remove	No	1.2
4968	Good	296		*Syringa reticulata 'Ivory Silk'*	*Ivory Silk Lilac*	1	8	8	G	G	G	1	5	City of Vaughan Tree Protection By-law	Remove	No	1.2
4969	Good	297	Picepun	*Picea pungens*	*Blue Spruce*	1	19	19	G	G	G	2	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4969	Good	298	Picepun	*Picea pungens*	*Blue Spruce*	1	16	16	G	G	G	2	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4970	Good	299	Tilicor	*Tilia cordata*	*Little-leaf Linden*	1	14	14	G	G	G	3	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4970	Good	300	Tilicor	*Tilia cordata*	*Little-leaf Linden*	1	17	17	G	G	G	3	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4971	Poor	301	piceabi	*Picea abies*	*Norway Spruce*	1	10	10	G	G	P	1	4	City of Vaughan Tree Protection By-law	Remove	No	1.8
4972	Dead	302	piceabi	*Picea abies*	*Norway Spruce*	1	18	18	G	G	P	0	5	City of Vaughan Tree Protection By-law	Remove	No	1.8
4973	Good	303	Tilicor	*Tilia cordata*	*Little-leaf Linden*	1	13	13	G	G	G	3	5	City of Vaughan Tree Protection By-law	Remove	No	1.8
4973	Good	304	Tilicor	*Tilia cordata*	*Little-leaf Linden*	1	16	16	G	G	G	3	5	City of Vaughan Tree Protection By-law	Remove	No	1.8
4974	Good	305	Picepun	*Picea pungens*	*Blue Spruce*	1	12	12	G	G	G	2	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4974	Fair	306	Picegla	*Picea glauca*	*White Spruce*	1	16	16	G	G	F	2	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4974	Fair	307	Picepun	*Picea pungens*	*Blue Spruce*	1	18	18	G	G	G	1.5	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4975	Good	308	Tilicor	*Tilia cordata*	*Little-leaf Linden*	1	9	9	F	G	G	2	5	City of Vaughan Tree Protection By-law	Remove	No	1.2
4975	Good	309	Tilicor	*Tilia cordata*	*Little-leaf Linden*	1	12	12	G	G	G	3	5	City of Vaughan Tree Protection By-law	Remove	No	1.8

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Trees to be Retained
Trees to be Preserved
Trees to be Removed
Tree location / grouping
Minimum TPZ reduction / Injury
Minimum TPZ reduction / No Injury

Photo #	Health / Condition	Tree #	Code	Botanical Name	Common Name	Qty.	DBH (cm)	Effective DBH (cm)	Trunk Integrity	Canopy Structure	Canopy Vigour	Dripline Radius (m)	Height (m)	Tree Location / Applicable By-law	Recommendations	Permits Required	Tree Protection Zone (m)
4976	Good	310	Acersac	*Acer saccharinum*	*Silver Maple*	1	21	21	G	G	G	3	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4977	Fair	311	Acersac	*Acer saccharinum*	*Silver Maple*	1	20	20	F	F	G	3	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4977	Good	312	Acersac	*Acer saccharinum*	*Silver Maple*	1	17	17	G	G	G	3	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
No Photo	Good	313	Acersac	*Acer saccharinum*	*Silver Maple*	1	20	20	G	G	G	3	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4978	Fair	314	Acersac	*Acer saccharinum*	*Silver Maple*	1	21	21	Poor	G	G	3	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4979	Fair	315	Acersac	*Acer saccharinum*	*Silver Maple*	1	15	15	G	P	F	3	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4980	Good	316	Picepun	*Picea pungens*	*Blue Spruce*	1	14	14	G	G	G	2	9	City of Vaughan Tree Protection By-law	Remove	No	1.8
No Photo	Good	317	Picegla	*Picea glauca*	*White Spruce*	1	9	9	G	G	G	1	8	City of Vaughan Tree Protection By-law	Remove	No	1.2
4980	Good	318	Picegla	*Picea glauca*	*White Spruce*	1	15	15	G	G	G	3	9	City of Vaughan Tree Protection By-law	Remove	No	1.8
4981	Good	319	Acercam	*Acer campestre*	*Hedge Maple*	1	16	16	G	G	G	2.5	7	City of Vaughan Tree Protection By-law	Remove	No	1.8
4982	Good	320	Querrub	*Quercus rubra*	*Northern Red Oak*	1	16	16	G	G	G	3	9	City of Vaughan Tree Protection By-law	Remove	No	1.8
4983	Good	321	Acersac	*Acer saccharinum*	*Silver Maple*	1	26	26	G	F	G	4	10	City of Vaughan Tree Protection By-law	Remove	No	1.8
4984	Fair	322	Acercam	*Acer campestre*	*Hedge Maple*	1	12	12	F	G	G	1	3	City of Vaughan Tree Protection By-law	Remove	No	1.8
4984	Good	323	Acerpla	*Acer platanoides*	*Norway Maple*	1	9	9	G	G	G	1	4	City of Vaughan Tree Protection By-law	Remove	No	1.2
4985	Good	324	Acerpla	*Acer platanoides*	*Norway Maple*	1	6	6	G	G	G	1	3	City of Vaughan Tree Protection By-law	Remove	No	1.2
4985	Good	325	Acercam	*Acer campestre*	*Hedge Maple*	1	23	23	G	G	G	3	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4986	Good	326	Acersac	*Acer saccharinum*	*Silver Maple*	1	24	24	G	G	G	4	10	City of Vaughan Tree Protection By-law	Remove	No	1.8
4987	Good	327	Acercam	*Acer campestre*	*Hedge Maple*	1	22	22	G	G	G	4	9	City of Vaughan Tree Protection By-law	Remove	No	1.8
4990	Good	328		*Syringa reticulata 'Ivory Silk'*	*Ivory Silk Lilac*	1	12	12	G	G	G	2	6	City of Vaughan Tree Protection By-law	Remove	No	1.8
4988	Good	329	Acersac	*Acer saccharinum*	*Silver Maple*	1	30	30	G	G	G	4	10	City of Vaughan Tree Protection By-law	Remove	No	2.4
4991	Good	330	Acersac	*Acer saccharinum*	*Silver Maple*	1	23	23	G	G	G	5	10	City of Vaughan Tree Protection By-law	Remove	No	1.8
4991	Good	331	Acersac	*Acer saccharinum*	*Silver Maple*	1	20	20	G	G	G	5	9	City of Vaughan Tree Protection By-law	Remove	No	1.8
No Photo	Good	332	Gledtri	*Gleditsia triacanthos*	*Honey-locust*	1	18	18	G	G	G	4	9	City of Vaughan Tree Protection By-law	Remove	No	1.8
No Photo	Good	333	Gledtri	*Gleditsia triacanthos*	*Honey-locust*	1	16	16	G	G	G	4	9	City of Vaughan Tree Protection By-law	Remove	No	1.8
No Photo	Good	334	Gledtri	*Gleditsia triacanthos*	*Honey-locust*	1	17	17	G	G	G	4	9	City of Vaughan Tree Protection By-law	Remove	No	1.8
No Photo	Good	335	Gledtri	*Gleditsia triacanthos*	*Honey-locust*	1	14	14	G	G	G	4	9	City of Vaughan Tree Protection By-law	Remove	No	1.8

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Minimum TPZ reduction / No Injury

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No Photo	Good	336	Tilicor	*Tilia cordata*	*Little-leaf Linden*	1	8	8	F	G	G	1	3	City of Vaughan Tree Protection By-law	Remove	No	1.2
No Photo	Good	337	Gledtri	*Gleditsia triacanthos*	*Honey-locust*	1	22	22	G	G	G	4	8	City of Vaughan Tree Protection By-law	Remove	No	1.8
4992	Good	P01	Picepun	*Picea pungens*	*Blue Spruce*	1	20	20	G	G	G	3	15	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
4992	Good	P02	Picepun	*Picea pungens*	*Blue Spruce*	1	20	20	G	G	G	3	15	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
4992	Good	P03	Picepun	*Picea pungens*	*Blue Spruce*	1	20	20	G	G	G	3	15	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
4992	Good	P04	Picepun	*Picea pungens*	*Blue Spruce*	1	15	15	G	G	G	3	12	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
No photo	Good	P05	Acerpla	*Acer platanoides*	*Norway Maple*	1	25	25	F	G	G	4	10	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
4993	Good	P06	Acerpla	*Acer platanoides*	*Norway Maple*	1	25	25	G	G	G	4	10	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
4993	Good	P07	Acerpla	*Acer platanoides*	*Norway Maple*	1	25	25	G	G	G	4	10	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
4994	Good	P08	Querrob	*Quercus robur*	*English Oak*	1	20	20	G	G	G	5	12	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
4994	Fair	P09	Querrob	*Quercus robur*	*English Oak*	1	20	20	F	G	F	5	10	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
4995	Good	P10	Querrob	*Quercus robur*	*English Oak*	1	20	20	G	G	G	5	12	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
4995	Good	P11	Querrob	*Quercus robur*	*English Oak*	1	20	20	G	G	G	5	12	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
4995	Good	P12	Querrob	*Quercus robur*	*English Oak*	1	20	20	G	G	G	4	8	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
4995	Good	P13	Querrob	*Quercus robur*	*English Oak*	1	20	20	G	G	G	4	8	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
4996	Fair	P14	Querrob	*Quercus robur*	*English Oak*	1	10	10	G	G	F	3	5	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
4997	Good	P15	Querrob	*Quercus robur*	*English Oak*	1	12	12	G	G	G	4	8	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
5000	Good	P16	Gledtri	*Gleditsia triacanthos*	*Honey-locust*	1	18	18	G	G	G	4	9	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
5000	Good	P17	Gledtri	*Gleditsia triacanthos*	*Honey-locust*	1	18	18	G	G	G	4	9	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
5001	Good	P18	Gledtri	*Gleditsia triacanthos*	*Honey-locust*	1	18	18	G	G	G	4	9	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
5001	Good	P19	Gledtri	*Gleditsia triacanthos*	*Honey-locust*	1	18	18	G	G	G	4	9	City of Vaughan Tree Protection By-law	Remove	N/A	1.8
5002	Fair	P20		*Elaeagnus angustifolia*	*Russian Olive*	1	20,10,10	40	G	F	G	4	8	City of Vaughan Tree Protection By-law	Remove	No	2.4
No Photo	Good	TG01	Acerneg	*Acer negundo*	*Manitoba Maple*	29	<10	<10	G	G	G			Regional Municipality of York Forest Conservation By-law	Remove	No	1.2
No Photo	Good	TG01	Fraxpen	*Fraxinus pennsylvanica*	*Green Ash*	8	<10	<10	G	G	G			Regional Municipality of York Forest Conservation By-law	Remove	No	1.2

Project: Vaughan Metropolitan Centre **Field Work Completed By:** Carlene Perkin & Carly Van Daele

Dates of Field Work: October 28 & November 4, 2021 **Weather:** 10C, overcast, gusty wind, no precip; 7C, overcast, low wind, no precip

Tree Condition Assessment Criteria:

TI - Trunk Integrity: assessment of the trunk for any defects or weaknesses.
CS - Canopy Structure: assessment of scaffold branches, unions and canopy
CV - Canopy vigour: assessment of the health of the tree, based on the % of deadwood, disease, pests & live crown

Tree Condition:

Good (G): tree displays less than 15% deficiency/defect within the given tree assessment criteria (TI,CS,CV)
Fair (F): tree displays 15-40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)
Poor (P): tree displays greater than 40% deficiency/defect within the given tree assessment criteria (TI,CS,CV)

Legend:

Trees to be Retained
Trees to be Preserved
Trees to be Removed
Tree location / grouping
Minimum TPZ reduction / Injury
Minimum TPZ reduction / No Injury

Photo #	Health / Condition	Tree #	Code	Botanical Name	Common Name	Qty.	DBH (cm)	Effective DBH (cm)	Trunk Integrity	Canopy Structure	Canopy Vigour	Dripline Radius (m)	Height (m)	Tree Location / Applicable By-law	Recommendations	Permits Required	Tree Protection Zone (m)
No Photo	Good	TG01		*Rhamnus cathartica*	*Common Buckthorn*	1	10 to 19	10 to 19	G	G	G			Regional Municipality of York Forest Conservation By-law	Remove	No	1.2
No Photo	Good	TG01		*Elaeagnus angustifolia*	*Russian Olive*	2	10 to 19	10 to 19	G	G	G			Regional Municipality of York Forest Conservation By-law	Remove	No	1.2
No Photo	Good	TG01		*Salix x fragilis*	*Crack Willow*	1	60 to 69	60 to 69	G	G	G			Regional Municipality of York Forest Conservation By-law	Remove	No	1.2
No Photo	Good	TG01		*Rhamnus cathartica*	*Common Buckthorn*	90	<10	<10	G	G	G			Regional Municipality of York Forest Conservation By-law	Remove	No	1.8
No Photo	Good	TG01	Prunser	*Prunus serotina*	*Black Cherry*	7	<10	<10	G	G	G			Regional Municipality of York Forest Conservation By-law	Remove	No	1.8
No Photo	Good	TG01	Acerneg	*Acer negundo*	*Manitoba Maple*	19	10 to 19	10 to 19	G	G	G			Regional Municipality of York Forest Conservation By-law	Remove	No	1.8
No Photo	Good	TG01	Acerneg	*Acer negundo*	*Manitoba Maple*	10	20 to 29	20 to 29	G	G	G			Regional Municipality of York Forest Conservation By-law	Remove	No	1.8
No Photo	Good	TG01	Acerneg	*Acer negundo*	*Manitoba Maple*	4	30 to 39	30 to 39	G	G	G			Regional Municipality of York Forest Conservation By-law	Remove	No	1.8
No Photo	Good	TG01		*Salix x fragilis*	*Crack Willow*	1	30 to 39	30 to 39	G	G	G			Regional Municipality of York Forest Conservation By-law	Remove	No	1.8
No Photo	Good	TG01		*Crataegus sp.*	*Hawthorn Species*	4	<10	<10	G	G	G			Regional Municipality of York Forest Conservation By-law	Remove	No	2.4
No Photo	Good	TG01		*Salix x fragilis*	*Crack Willow*	1	20 to 29	20 to 29	G	G	G			Regional Municipality of York Forest Conservation By-law	Remove	No	2.4
No Photo	Good	TG01		*Populus × canadensis*	*Canada Poplar*	1	20 to 29	20 to 29	G	G	G			Regional Municipality of York Forest Conservation By-law	Remove	No	4.2
4989	Good	TG02		*Thuja occidentalis 'Smaragd'*	*Emerald Green Cedar*	6	1 to 8	1 to 8	G	G	G	0.5	4	City of Vaughan Tree Protection By-law	Remove	No	1.2

Appendix B: Tree Inventory Plan

KEY MAP

SCALE: 1:15,000

LEGEND

- ⊗ INDIVIDUAL TREES TO BE REMOVED
- ○ TREE PROTECTION ZONE
- SITE BOUNDARY
- STUDY AREA INCLUDING 6 M CONSTRUCTION BUFFER

0 5 10 20

1:500 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. BASE MAP: © THE REGIONAL MUNICIPALITY OF YORK, CITY OF TORONTO, ON, PEEL REGION, MAXAR, MICROSOFT, YORK UNIVERSITY, CITY OF BRAMPTON, CITY OF TORONTO, YORK REGION, PROVINCE OF ONTARIO, ONTARIO MNR, ESRI CANADA, ESRI, HERE, GARMIN, INCREMENT P, USGS, METI/NASA, EPA, USDA, AAFC, NRCAN
3. COORDINATE SYSTEM: NAD 1983 CSRS UTM ZONE 17N

CLIENT
CITY OF VAUGHAN

PROJECT
DRAFT VAUGHAN METROPOLITAN CENTRE (VMC) SCHEDULE 'C' CLASS ENVIRONMENTAL ASSESSMENT (EA) STUDIES FOR THE EXTENSIONS OF INTERCHANGE WAY AND MILLWAY

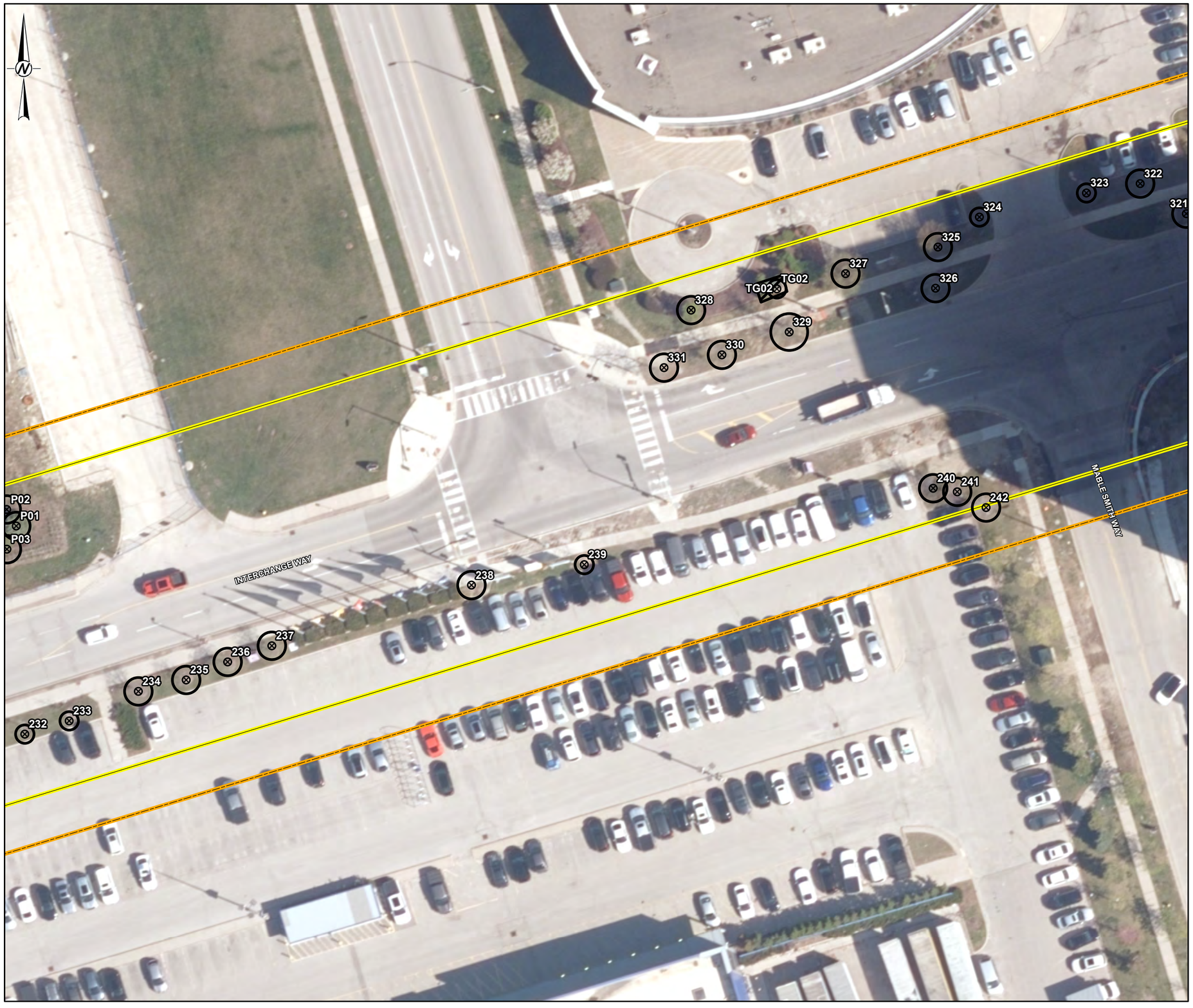
TITLE
TREE INVENTORY

CONSULTANT

wsp

YYYY-MM-DD	2024-05-13
DESIGNED	SO
PREPARED	LS
REVIEWED	SS/JT
APPROVED	----

PROJECT NO.	CONTROL	REV.	FIGURE
20M-01179-00	0001	A	2



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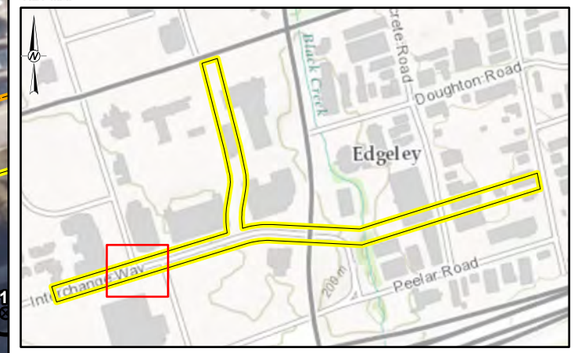

SCALE: 1:15,000

LEGEND

- INDIVIDUAL TREES TO BE REMOVED
- TREE PROTECTION ZONE
- SITE BOUNDARY
- STUDY AREA INCLUDING 6 M CONSTRUCTION BUFFER
- TREE GROUPING

0 5 10 20

1:500 METRES

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TREE INVENTORY

CONSULTANT

wsp

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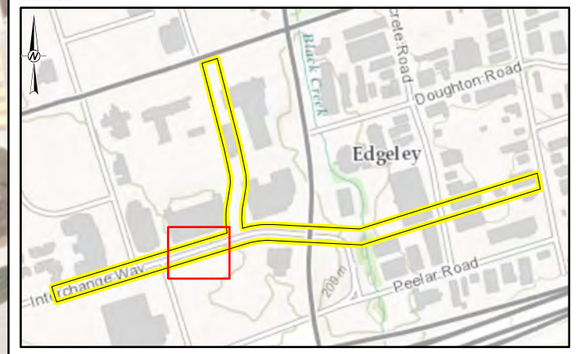
REVIEWED	SS/JT
APPROVED	----

PROJECT NO.	CONTROL	REV.	FIGURE
20M-01179-00	0001	A	3

KEY MAP



SCALE: 1:15,000

LEGEND

- INDIVIDUAL TREES TO BE REMOVED
- TREE PROTECTION ZONE
- SITE BOUNDARY
- STUDY AREA INCLUDING 6 M CONSTRUCTION BUFFER

0 5 10 20

1:500 METRES

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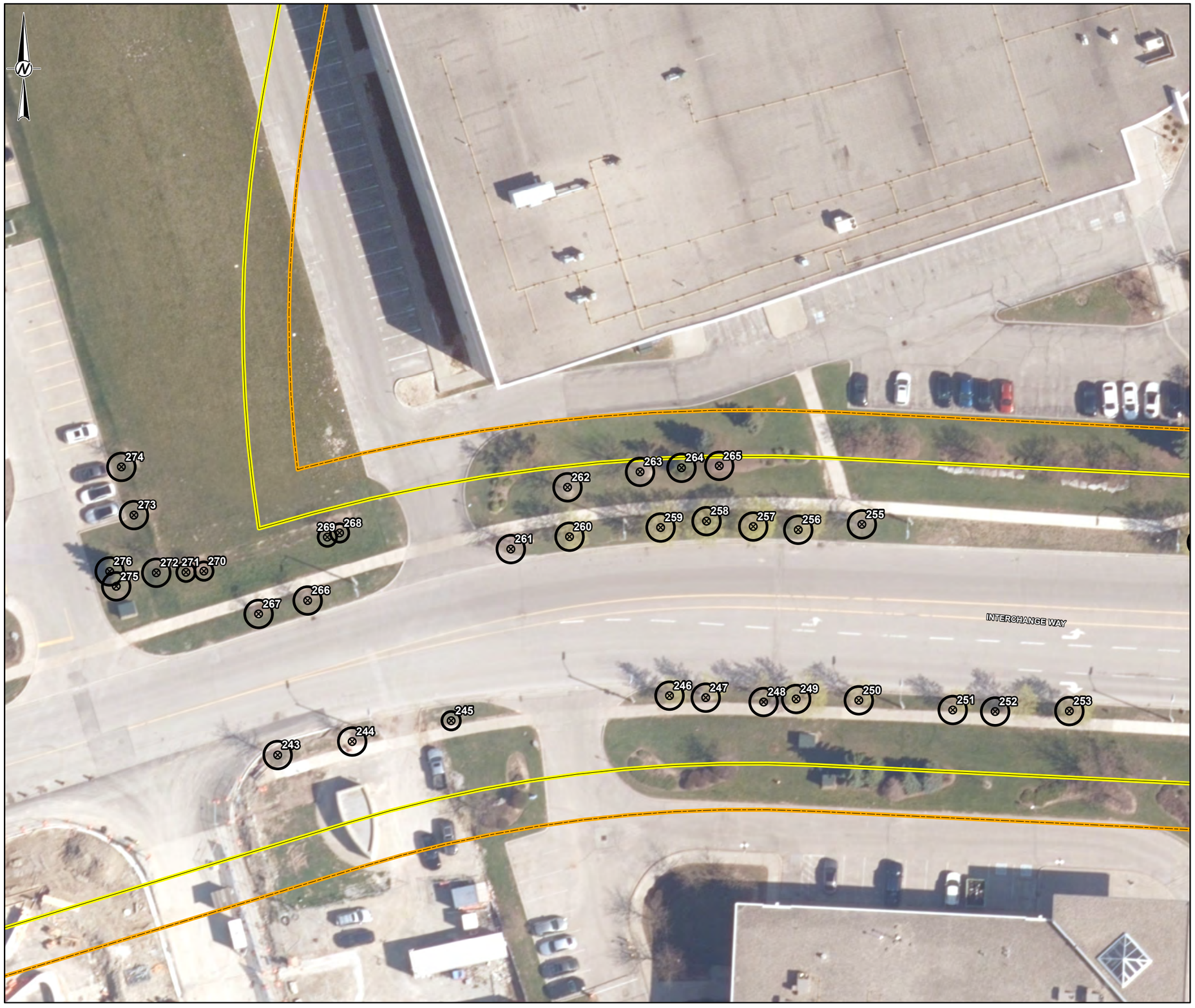
APPROVED	----

PROJECT NO.	CONTROL	REV.	FIGURE
20M-01179-00	0001	A	4



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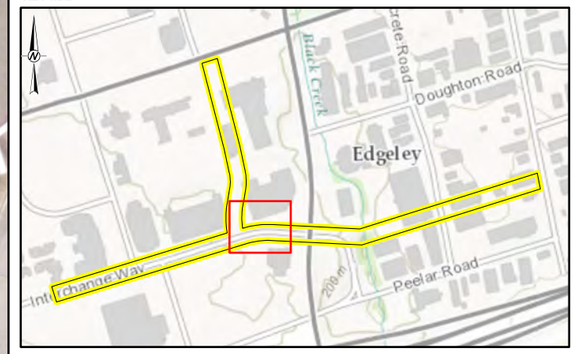

SCALE: 1:15,000

LEGEND

- INDIVIDUAL TREES TO BE REMOVED
- TREE PROTECTION ZONE
- SITE BOUNDARY
- STUDY AREA INCLUDING 6 M CONSTRUCTION BUFFER

0 5 10 20

1:500 METRES

NOTE(S)

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PROJECT

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TITLE

TREE INVENTORY

CONSULTANT

wsp

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APPROVED	----

PROJECT NO.	CONTROL	REV.	FIGURE
20M-01179-00	0001	A	5

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

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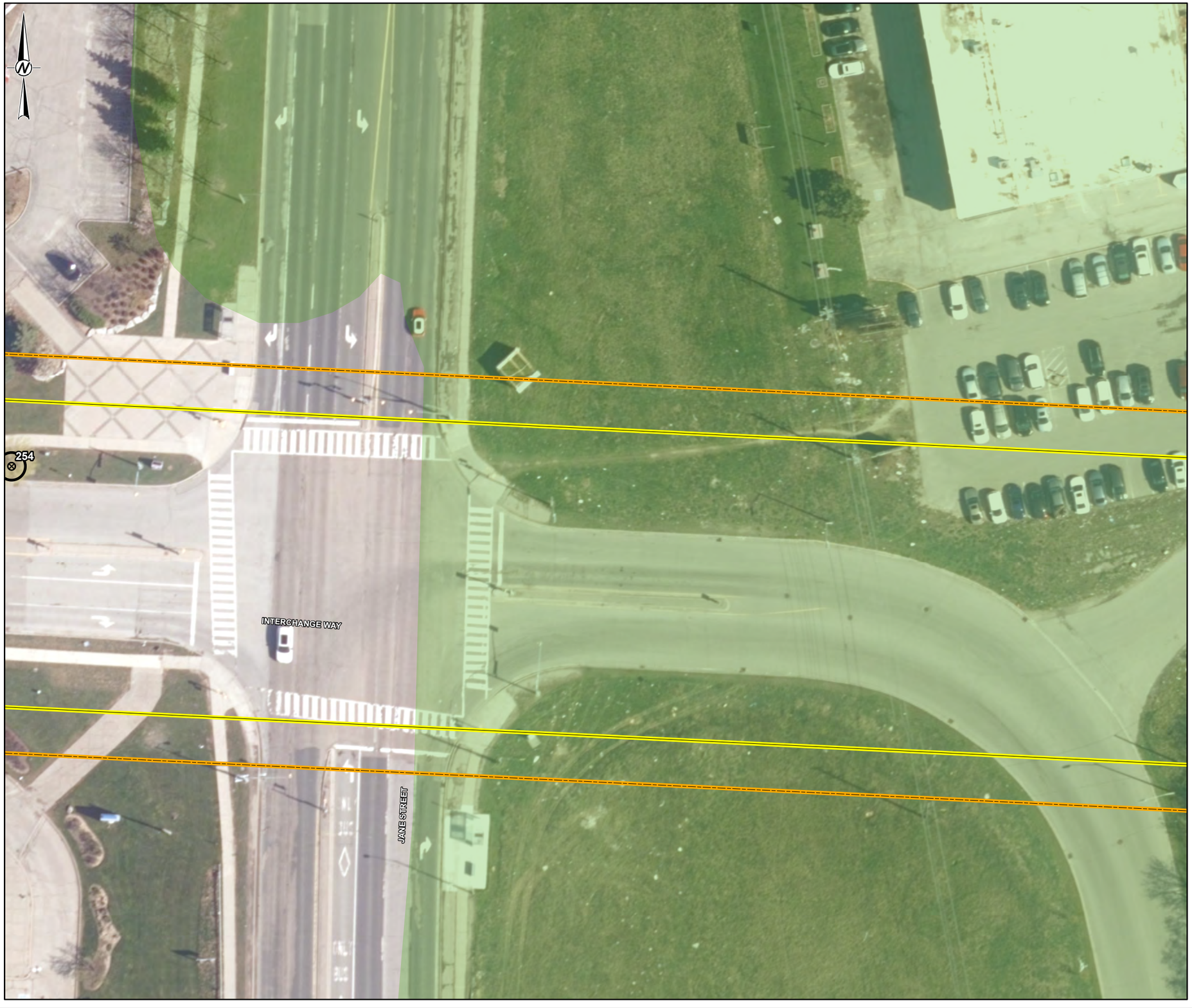

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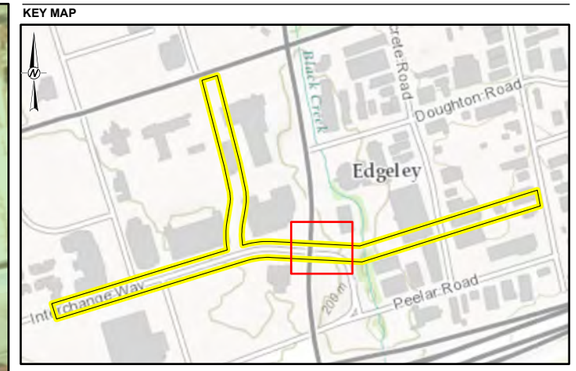

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LEGEND

- INDIVIDUAL TREES TO BE REMOVED
- TREE PROTECTION ZONE
- SITE BOUNDARY
- STUDY AREA INCLUDING 6 M CONSTRUCTION BUFFER
- TRCA REGULATED AREA

0 5 10 20

1:500 METRES

NOTE(S)
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CONSULTANT

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APPROVED	----

PROJECT NO.	CONTROL	REV.	FIGURE
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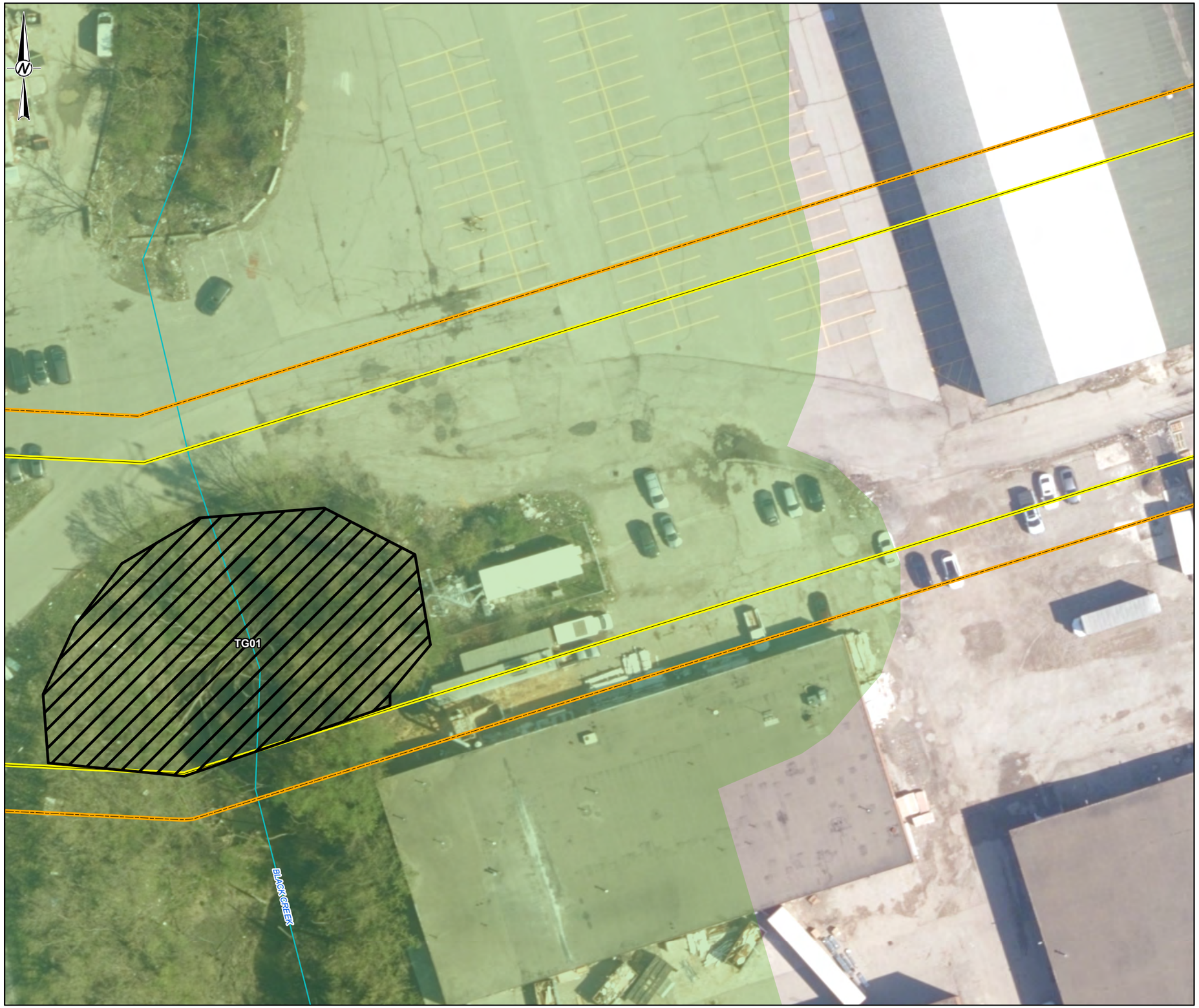

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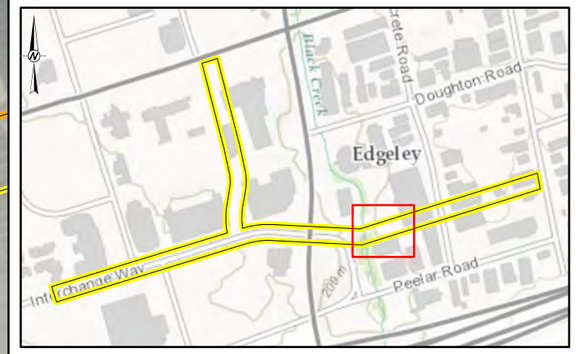

SCALE: 1:15,000

LEGEND

- WATERCOURSE
- SITE BOUNDARY
- STUDY AREA INCLUDING 6 M CONSTRUCTION BUFFER
- TREE GROUPING
- TRCA REGULATED AREA

0 5 10 20

1:500 METRES

NOTE(S)

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TITLE

TREE INVENTORY

CONSULTANT

wsp

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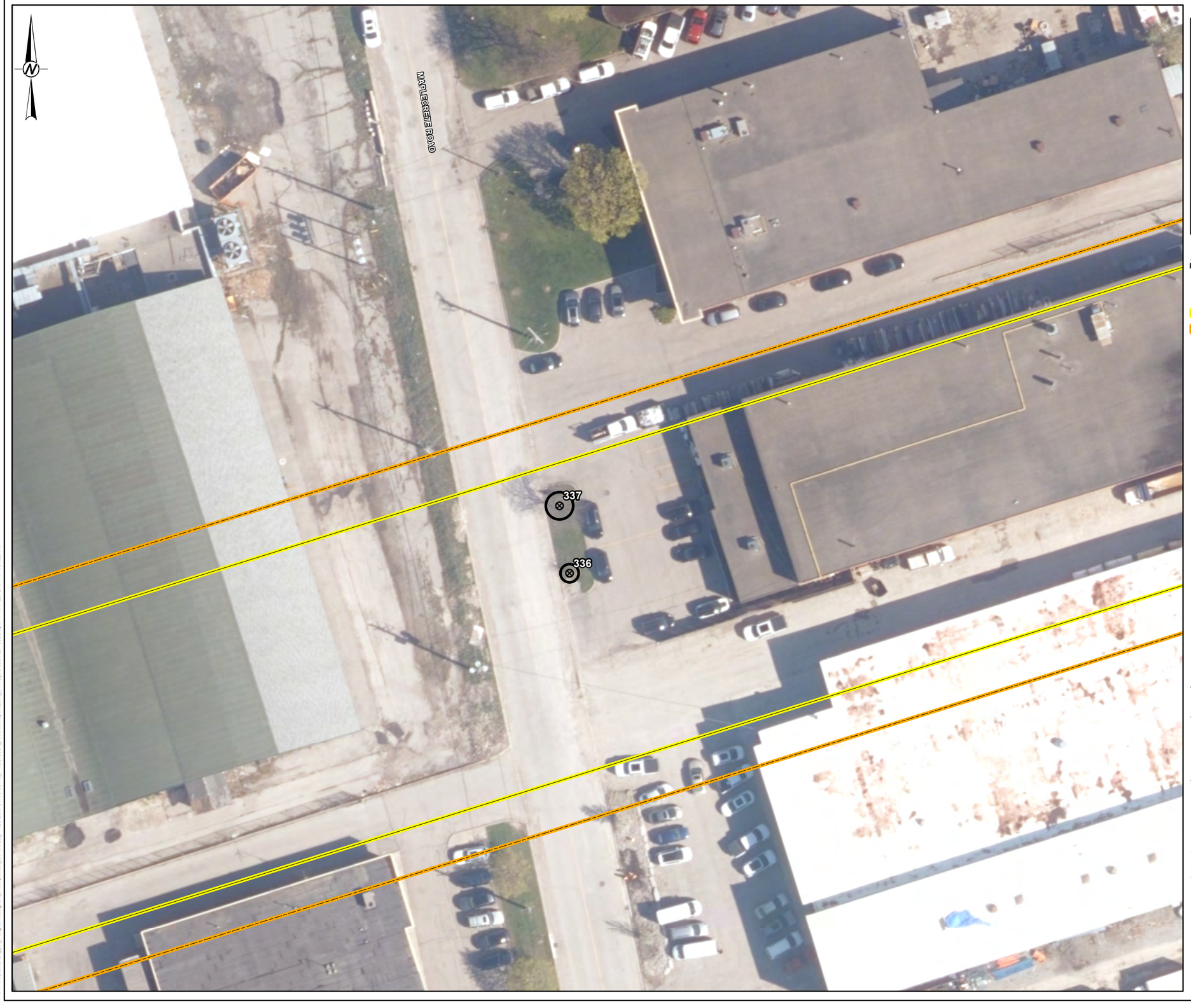
PROJECT NO.	CONTROL	REV.	FIGURE
20M-01179-00	0001	A	7



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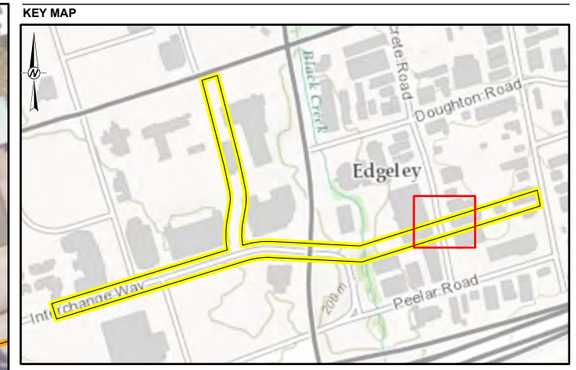

SCALE: 1:15,000

LEGEND

- ⊗ INDIVIDUAL TREES TO BE REMOVED
- ○ TREE PROTECTION ZONE
- SITE BOUNDARY
- STUDY AREA INCLUDING 6 M CONSTRUCTION BUFFER

0 5 10 20

1:500 METRES

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TITLE

TREE INVENTORY

CONSULTANT

wsp

YYYY-MM-DD	2024-05-13
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PREPARED	LS
REVIEWED	SS/JT
APPROVED	----

PROJECT NO.	CONTROL	REV.	FIGURE
20M-01179-00	0001	A	8

KEY MAP

SCALE: 1:15,000

LEGEND

- INDIVIDUAL TREES TO BE REMOVED
- TREE PROTECTION ZONE
- SITE BOUNDARY
- STUDY AREA INCLUDING 6 M CONSTRUCTION BUFFER

0 5 10 20

1:500 METRES

NOTE(S)

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CLIENT
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wsp

YYYY-MM-DD	2024-05-13
DESIGNED	SO
PREPARED	LS
REVIEWED	SS/JT
APPROVED	----

PROJECT NO.	CONTROL	REV.	FIGURE
20M-01179-00	0001	A	9

Appendix C: Photographic Inventory

Photo # 4866

Photo # 4867

Photo # 4868

Photo # 4869

Photo # 4870

Photo # 4871

Photo # 4872

Photo # 4873

Photo # 4874

Photo # 4875

Photo # 4876

Photo # 4877

Photo # 4878

Photo # 4879

Photo # 4880

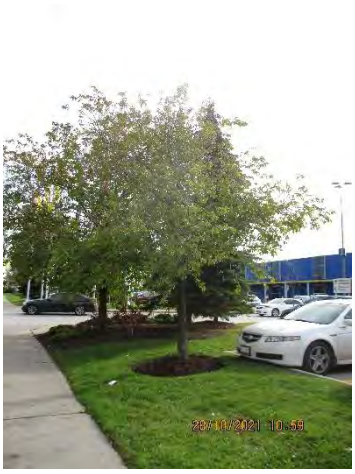

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Photo # 4882

Photo # 4883

Photo # 4884

Photo # 4885

Photo # 4886

Photo # 4887

Photo # 4888

Photo # 4889

Photo # 4890

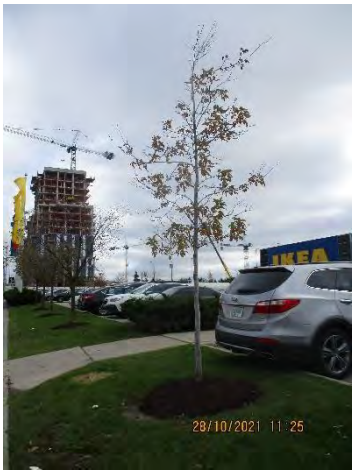

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Photo # 4892

Photo # 4893

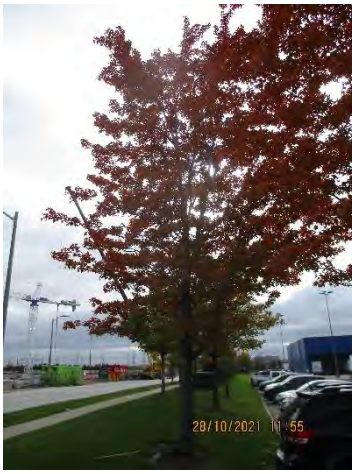
Photo # 4894

Photo # 4895

Photo # 4896

Photo # 4897

Photo # 4898



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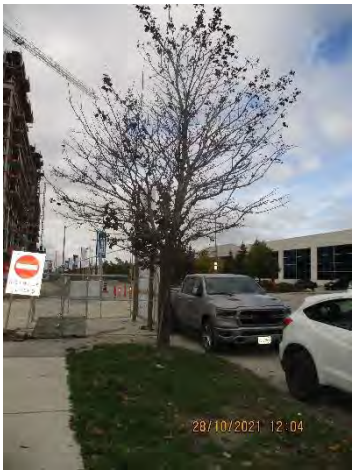

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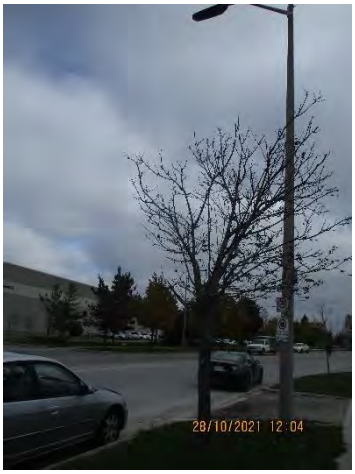

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Photo # 4903

Photo # 4904

Photo # 4905

Photo # 4906

Photo # 4907

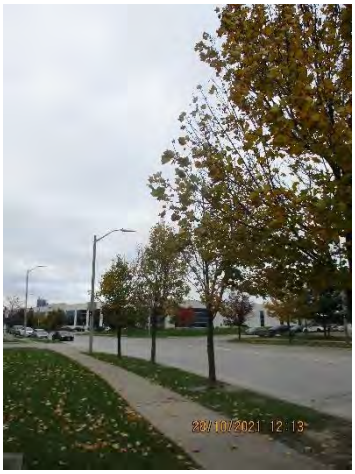

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Photo # 4909

Photo # 4910

Photo # 4911

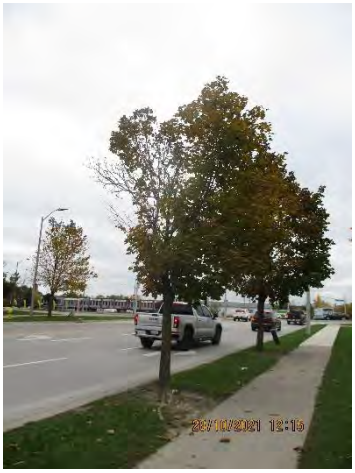

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Photo # 4915

Photo # 4916

Photo # 4917

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Photo # 4919

Photo # 4920

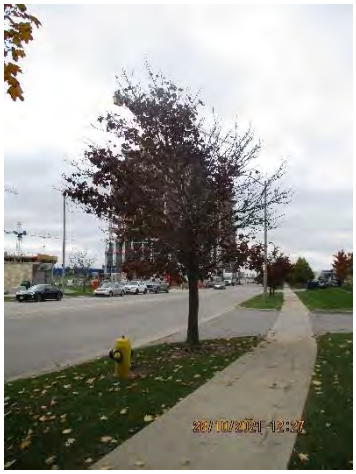

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Photo # 4924

Photo # 4925

Photo # 4926

Photo # 4927

Photo # 4928

Photo # 4929

Photo # 4930

Photo # 4931

Photo # 4932

Photo # 4933

Photo # 493Photo # 4

Photo # 4935

Photo # 4936

Photo # 4937

Photo # 4938

Photo # 4939

Photo # 4940

Photo # 4941

Photo # 4942

Photo # 4943

Photo # 4944

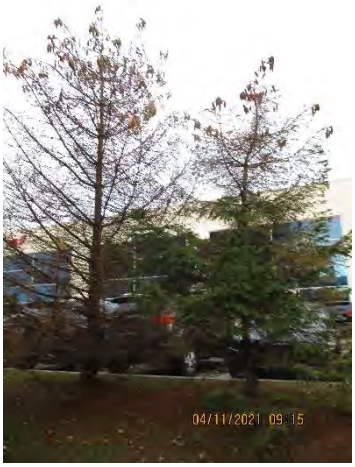
Photo # 4966

Photo # 4967

Photo # 4968

Photo # 4969

Photo # 4970



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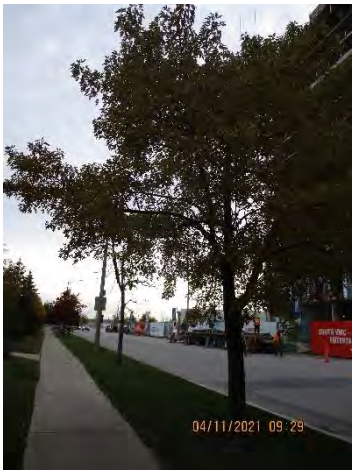

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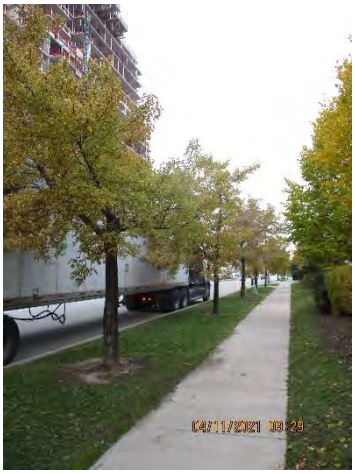

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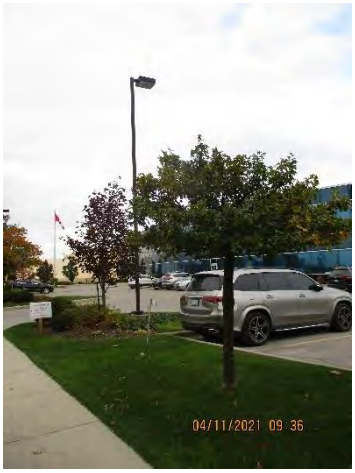

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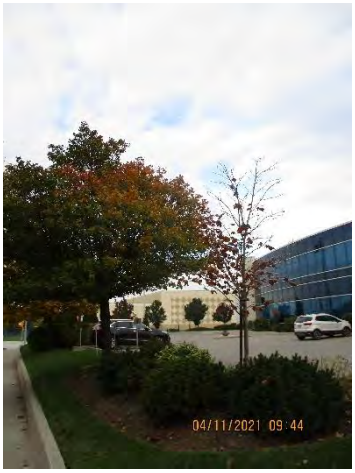

Photo # 4985

Photo # 4986

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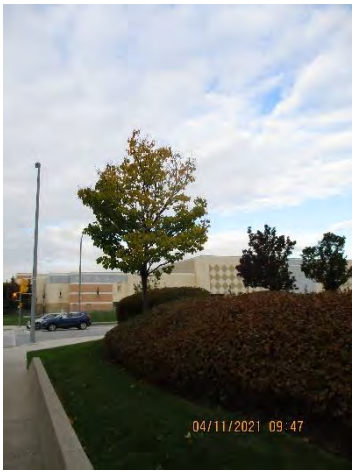

Photo # 4990

Photo # 4991

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Photo # 4993

Photo # 4994

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Photo # 4996

Photo # 4997

Photo # 4998

Photo # 4999

Photo # 5000

Photo # 5001

Photo # 5002

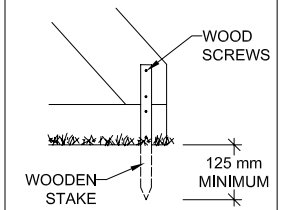
Photo # 5003

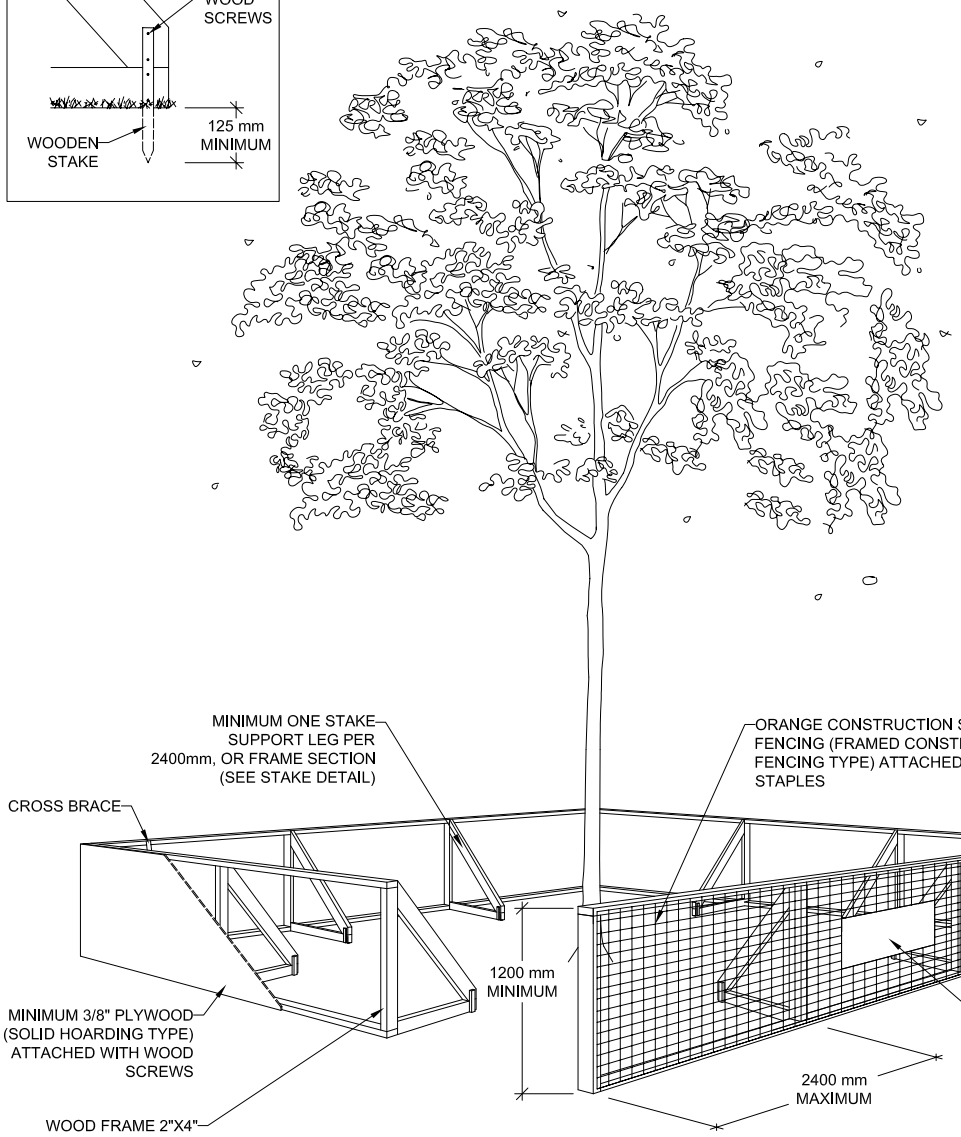
Photo # 5004

Photo # 5005

Appendix D: NHF Details

STAKE DETAIL

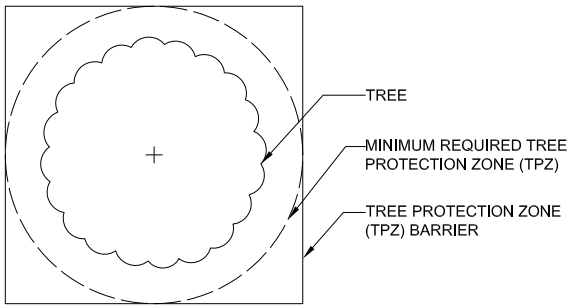




NOTES

1. REFER TO YORK REGION STREET TREE AND FOREST PRESERVATION GUIDELINES FOR COMPLETE TREE PRESERVATION REQUIREMENTS.
2. TREE PROTECTION ZONE (TPZ) BARRIERS SHALL BE INSTALLED AT THE OUTER LIMIT OF THE MINIMUM REQUIRED TPZ FOR EACH TREE TO BE PRESERVED AND OR AS DIRECTED IN THE APPROVED TREE PROTECTION PLAN BY YORK REGION NATURAL HERITAGE AND FORESTRY.
3. TPZ IS DELINEATED AS A RADIUS, IN METRES, MEASURED OUTWARD FROM THE BASE OF THE TREE TO BE PROTECTED. THE TPZ RADIUS IS DETERMINED BASED UPON THE DIAMETER AT BREAST HEIGHT (DBH) OF THE TREE'S MAIN STEM. FOR MULTI-STEMMED TREES, THE DIAMETER OF THE MAIN STEM OF STEMS OF A TREE ARE MEASURED IN CENTIMETRES AT 30cm ABOVE GRADE LEVEL. THE TPZ FOR ALL TREES 24cm DBH OR LESS IS A MINIMUM OF 2.4m. THE TPZ FOR TREES 25cm OR GREATER IS 10cm FOR EVERY CENTIMETRE OF DBH.
4. TPZ BARRIERS SHALL PROTECT CONTIGUOUS GROUPS OF TREES WHEREVER POSSIBLE.
5. TPZ BARRIERS SHALL BE ESTABLISHED, INSPECTED, AND APPROVED BY YORK REGION OR ITS DESIGNATE PRIOR TO COMMENCEMENT OF ANY SITE DISTURBANCE.
6. TPZ BARRIERS SHALL BE INSPECTED BY A QUALIFIED TREE PROFESSIONAL ONCE WEEKLY OR ON A SCHEDULE APPROVED BY THE YORK REGION OR ITS DESIGNATE.
7. TPZ BARRIERS SHALL NOT BE MOVED, MODIFIED, OR RELOCATED AT ANY TIME WITHOUT PRIOR APPROVAL OF YORK REGION OR ITS DESIGNATE.

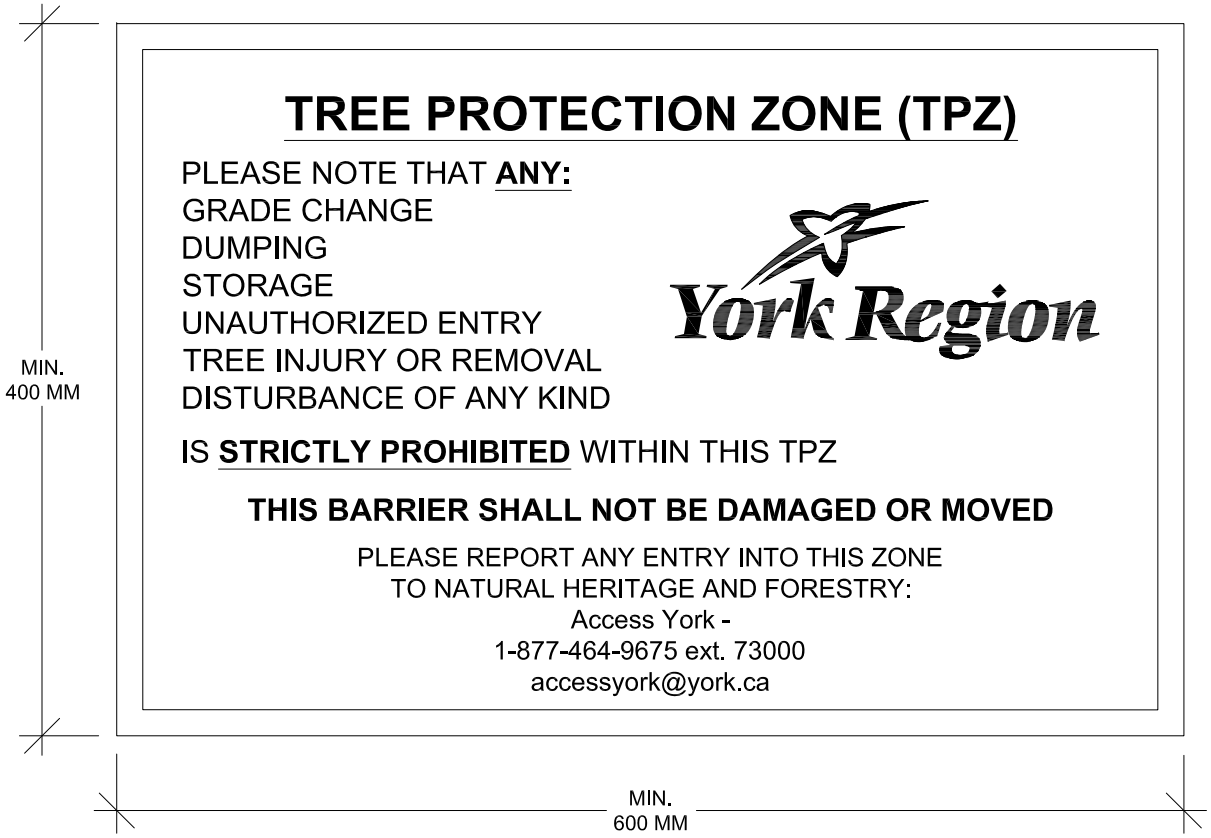
PLAN VIEW



York Region Environmental Services

TREE PROTECTION ZONE (TPZ) BARRIER

DATE: JANUARY 2022			SCALE N.T.S.
REV.	X	X	NHF - 400



NOTES

1. REFER TO YORK REGION STREET TREE AND FOREST PRESERVATION GUIDELINES FOR COMPLETE TREE PRESERVATION REQUIREMENTS.
2. TPZ SIGNAGE SHALL BE INSTALLED ON AT LEAST TWO SIDES OF THE TPZ BARRIER WITH DISTANCE BETWEEN SIGNS NOT TO EXCEED 10 METRES ON ANY ONE SIDE.

York Region Environmental Services

TREE PROTECTION ZONE (TPZ) SIGNAGE

DATE: JANUARY 2022			SCALE N.T.S.
REV.	X	X	NHF - 401

General

1. York Region Street Tree and Forest Preservation Guidelines (the "Guidelines") must be implemented where site disturbance is proposed in the Regional road allowance and any Region–owned street trees and/or natural vegetation is within 10m or less of the limit of proposed site disturbance.
2. These Guidelines must also be implemented where site disturbance is proposed outside of the Regional road allowance and Region–owned street trees and/or natural vegetation are situated within 10m of the limit of potential site disturbance and/or where Region–owned street trees and/or natural vegetation are situated more than 10m but may be adversely impacted by the proposed site disturbance.
3. All tree preservation measures shall be in accordance with the Guidelines.
4. All proposed tree preservation measures must be described in the Arborist Report and shown on the Tree Protection Plan and approved by York Region Environmental Services Department, Natural Heritage and Forestry. Refer to the Guidelines for tree inventory, tree removal compensation and other requirements.
5. All tree protection zone barriers shall be installed prior to any site disturbance, including tree removals, and must remain in good repair for the duration of construction.
6. At the sole discretion of York Region Natural Heritage and Forestry, any existing trees that die or exhibit a decline in health prior to final acceptable shall be compensated for in accordance with the Guidelines.
7. York Region Natural Heritage and Forestry shall be notified when tree protection measures have been installed, and before tree removals, if applicable.

Tree Protection Zone (TPZ)

8. A minimum Tree Protection Zone (TPZ) will be established around every tree to be preserved in accordance with the Guidelines and a York Region–approved Tree Protection Plan.
9. No entry or activity shall be permitted within the TPZ without prior written approval of York Region Natural Heritage and Forestry.
10. Prohibited activities within the TPZ include but are not limited to installation or attachment of any items to the tree; operation of equipment or machinery; storage of equipment, machinery or materials; access by any personnel; placement of trailers, temporary buildings or structures; flushing, storage or dumping of fuels, chemicals or other contaminants; stockpiling of soil; digging, trenching, or excavation; and/or change to existing grade.
11. Permitted activities within the TPZ, with prior written approval of York Region Natural Heritage and Forestry and overseen by a qualified tree professional, include but are not limited to encroachment activities related to tree protection provisions such as canopy clearance pruning, root–sensitive excavation and root pruning, tree stem protection and other arboricultural maintenance.

Tree Protection Zone (TPZ) Barrier

12. A Tree Protection Zone (TPZ) barrier shall be constructed around the TPZ of every tree to be preserved in accordance with the Guidelines and a York Region–approved Tree Protection Plan. The TPZ barrier shall follow York Region standard drawing 'Tree Protection Zone (TPZ) Barrier NHF–400'
13. Where trees to be protected are located in close proximity to each other, the TPZ barrier shall be installed to protect trees in contiguous groups.
14. The TPZ barrier shall be installed prior to commencement of any site disturbance. Site disturbance shall not commence until the installation of all TPZ barriers has been completed and has been verified and approved by York Region or its designate.
15. The TPZ barrier shall be constructed on a 2x4 frame. The height of the frame shall measure a minimum of 1.2m (4 feet), and the width of individual frame sections shall not exceed 2.4m (8 feet).
16. The frame shall be supported by diagonal 2x4 support legs installed inside the TPZ, secured to the frame using wood screws, and secured to the ground using a wooden stake installed a minimum of 125mm into the ground. A minimum of 1 support leg shall be installed per 2.4m (8 feet) of linear TPZ barrier distance, or per frame section.
17. Framed construction fencing is the primary method for TPZ barrier construction. Orange construction safety fencing shall be securely and tightly stapled to the outside of the TPZ barrier frame to construct the framed construction fencing TPZ barrier type. Other fencing materials (e.g., chicken wire, green snow fence, etc.) shall not be used.
18. Solid hoarding shall be installed where there is a significant risk of fill or other material being piled against the TPZ barrier, or where heavy machinery is to be operated in close proximity to the TPZ barrier. Plywood or oriented strand board (OSB) sheathing with a minimum thickness of 3/8" shall be affixed using wood screws to the outside of the TPZ barrier frame to construct the solid hoarding TPZ barrier type. Nails, staples or other fasteners shall not be used.
19. If required, and as approved in the Arborist Report, silt barrier fencing shall be installed using a 'no–dig' method as described in the Guidelines.

Tree Protection Zone (TPZ) Signage

20. All Tree Protection Zone (TPZ) signage shall be in accordance with the Guidelines.
21. Signage shall follow York Region standard drawing 'Tree Protection Zone (TPZ) Signage NHF–401' and shall be installed on at least two sides of the TPZ barrier. The distance between individual signs shall not exceed 10m on any one side of the TPZ barrier.

Maintenance and Inspection

22. TPZ barriers shall remain in place and in good working order and appearance throughout the duration of site disturbance until completion of all works.
23. TPZ barriers shall not be moved, modified, or relocated at any time without the approval of York Region or its designate.
24. TPZ barriers shall be inspected by a qualified tree professional once–weekly or on a schedule approved by York Region or its designate. Any deficiencies shall be noted in writing and any TPZ barriers found to be in substandard condition shall be repaired, modified or replaced as necessary within 48 hours of formal notification by York Region or its designate.

Encroachment

25. All encroachment work shall be in accordance with the Guidelines and a York Region–approved Tree Protection Plan and Arborist Report.
26. A qualified tree professional must be present for all encroachment work within the TPZ.
27. York Region Natural Heritage and Forestry shall be notified with 24 hours of notice prior to work occurring within the TPZ.
28. TPZ barriers shall be placed at the limit of encroachment and not be moved at any time during construction unless under the supervision of a qualified tree professional.
29. Below–grade encroachment: root sensitive excavation and root pruning shall be undertaken prior to conventional excavation as per standard drawing NHF–403.
30. At–grade encroachment: root zone compaction protection provisions must be followed as per standard drawing NHF–404.
31. Above–grade encroachment: tree stem protection provisions must be followed as per standard drawing NHF–405.
32. After the completion of construction, soil compaction and restoration provisions shall be followed when deemed necessary by York Region Natural Heritage and Forestry.

Pruning

33. All pruning work shall be in accordance with the Guidelines and a York Region–approved Tree Protection Plan and Arborist Report.
34. No tree branches or tree roots shall be pruned without written approval of York Region or its designate.
35. Approved pruning must follow arboriculture best practices and be undertaken by an ISA Certified Arborist or an Ontario College of Trades 444A Arborist or Arborist Apprentice only.
36. No other trades personnel are permitted to prune tree branches or tree roots.

Other

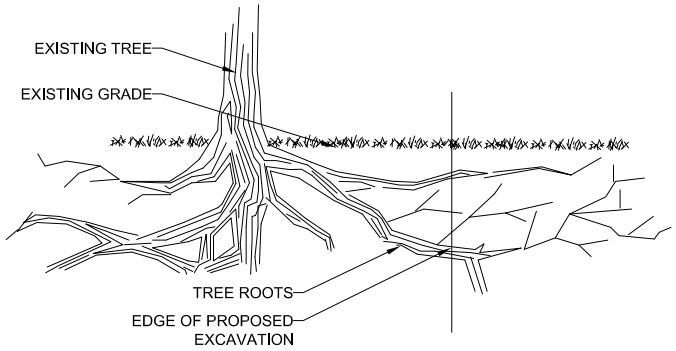
37. Other tree preservation measures may be required to be implemented wherever site disturbance is proposed, anticipated or likely to occur within or in close proximity to Tree Protection Zones (TPZs) and trees to be preserved. Other acceptable tree preservation measures are described in the Guidelines.

York Region Environmental Services

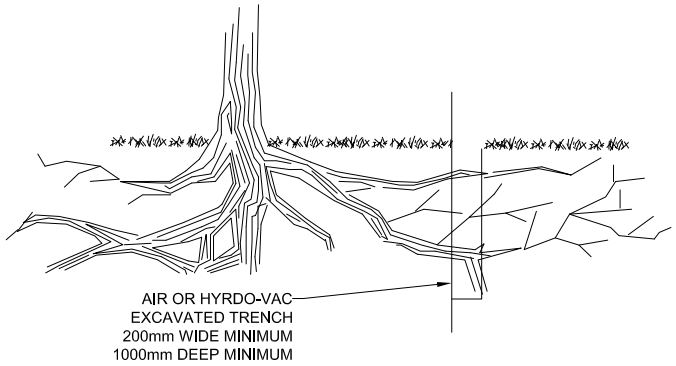
STANDARD TREE PROTECTION NOTES

DATE: JANUARY 2022			SCALE N.T.S.
REV.	X	X	NHF - 402

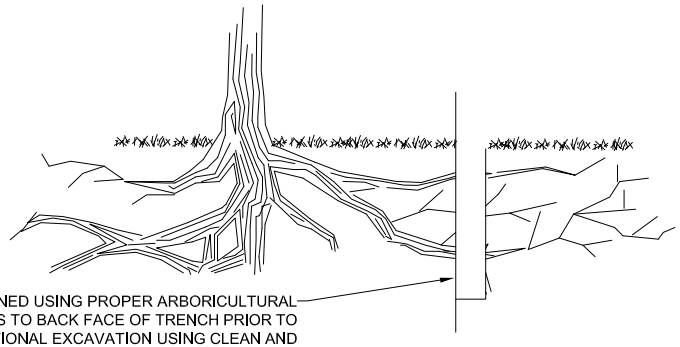
1. EXISTING CONDITIONS (TYP.)



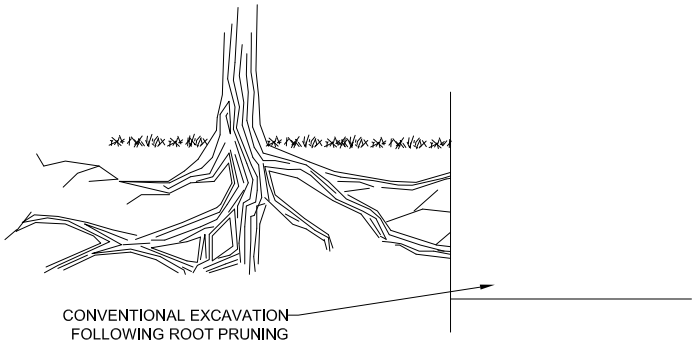
2. ROOT-SENSITIVE EXCAVATION (TYP.)



3. ROOT PRUNING (TYP.)



4. CONVENTIONAL EXCAVATION (TYP.)



NOTES

1. REFER TO YORK REGION STREET TREE AND FOREST PRESERVATION GUIDELINES FOR COMPLETE TREE PRESERVATION REQUIREMENTS.
2. NO ROOTS GREATER THAN 60mm SHALL BE PRUNED WITHOUT AUTHORIZATION OF YORK REGION OR ITS DESIGNATE.
3. PROLONGED EXPOSURE OF TREE ROOTS MUST BE AVOIDED.
4. ROOT-SENSITIVE EXCAVATION AND ROOT PRUNING SHALL BE COMPLETED BY A QUALIFIED TREE PROFESSIONAL WITH PRIOR WRITTEN APPROVAL BY YORK REGION OR ITS DESIGNATE.
5. UPON COMPLETION, DOCUMENTATION OF THESE ACTIVITIES SHALL BE SUBMITTED TO YORK REGION.

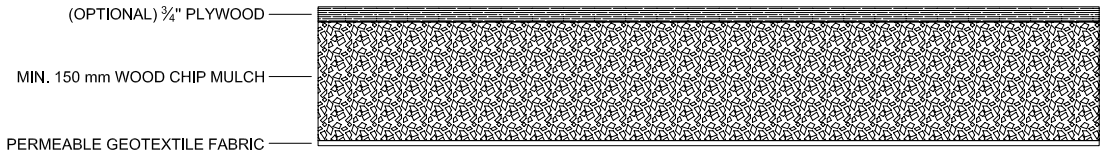
York Region Environmental Services

ROOT-SENSITIVE EXCAVATION AND ROOT PRUNING

DATE: JANUARY 2022			SCALE N.T.S.
REV.	X	X	NHF - 403

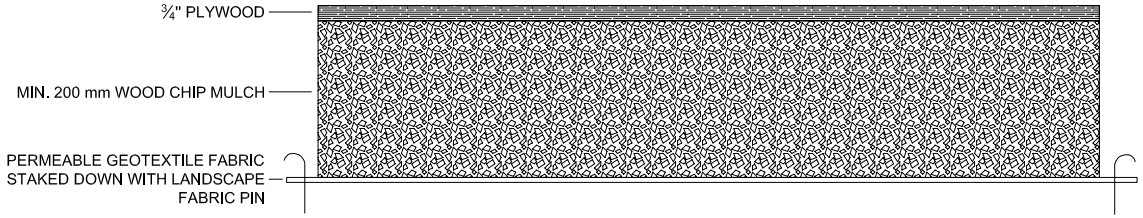
LIGHT ROOT ZONE COMPACTION PROTECTION

LIGHT ROOT ZONE COMPACTION PROTECTION SHALL BE IMPLEMENTED WHERE LIMITED NON-VEHICULAR ACCESS IN THE TPZ IS ANTICIPATED (E.G., OCCASIONAL FOOT TRAFFIC, WHEELBARROW).



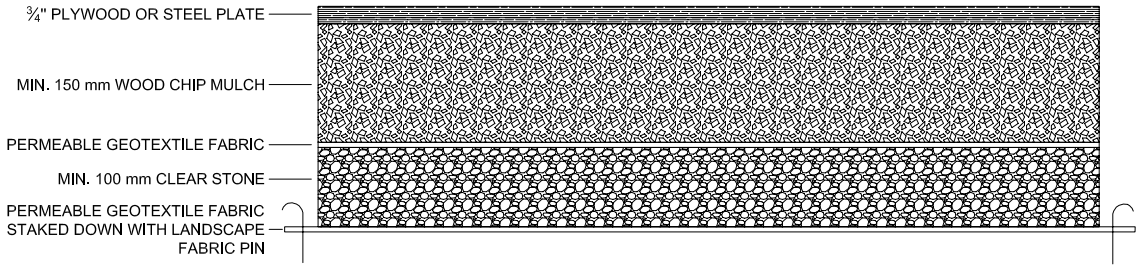
MODERATE ROOT ZONE COMPACTION PROTECTION

MODERATE ROOT ZONE COMPACTION PROTECTION SHALL BE IMPLEMENTED WHERE MORE FREQUENT NON-VEHICULAR ACCESS OR OCCASIONAL LIGHT VEHICLE (E.G., PICKUP TRUCK) ACCESS ACROSS THE TPZ IS ANTICIPATED.



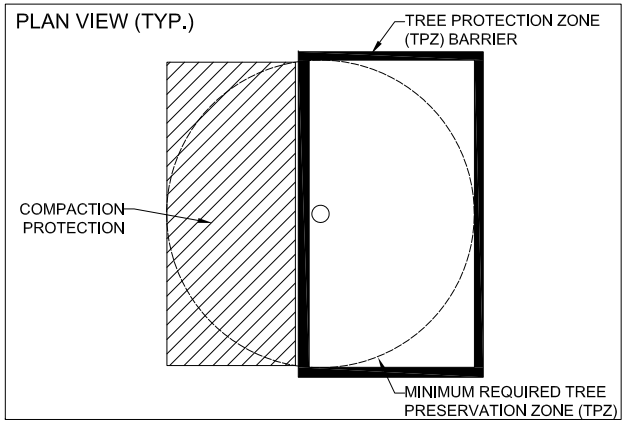
HEAVY ROOT ZONE COMPACTION PROTECTION

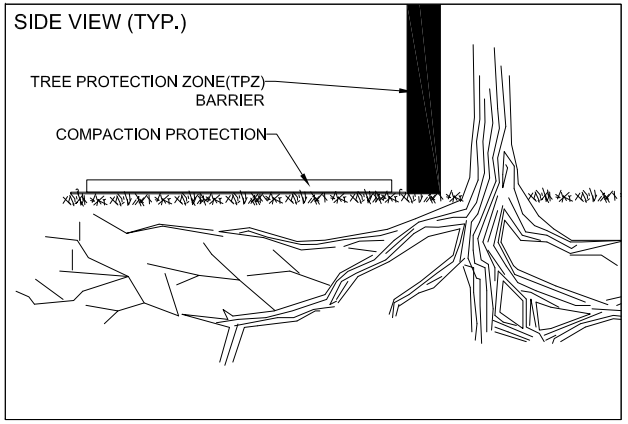
HEAVY ROOT ZONE COMPACTION PROTECTION SHALL BE IMPLEMENTED IN AREAS WHERE REGULAR VEHICLE ACCESS OR SIMILAR IMPACTS ARE ANTICIPATED IN THE TPZ.



NOTES

1. REFER TO YORK REGION STREET TREE AND FOREST PRESERVATION GUIDELINES FOR COMPLETE TREE PRESERVATION REQUIREMENTS.
2. ANY TPZ BARRIER ENCROACHMENT MUST BE PERMITTED IN WRITING BY YORK REGION OR ITS DESIGNATE.

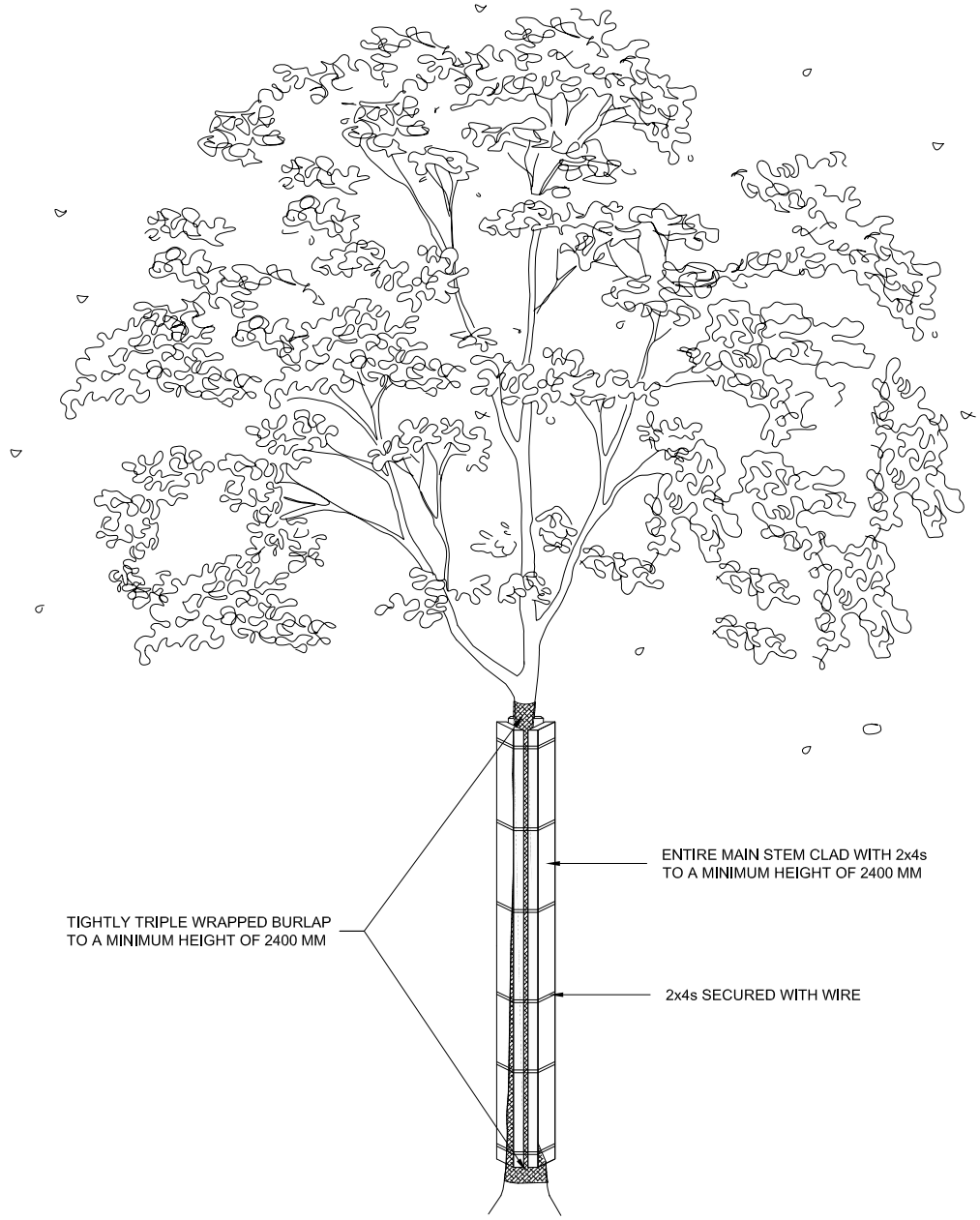




York Region Environmental Services

ROOT ZONE COMPACTION PROTECTION

DATE: JANUARY 2022			SCALE N.T.S.
REV.	X	X	NHF - 404



NOTES

1. REFER TO YORK REGION STREET TREE AND FOREST PRESERVATION GUIDELINES FOR COMPLETE TREE PRESERVATION REQUIREMENTS.
2. TREE STEM PROTECTION SHALL ONLY BE INSTALLED WHERE TPZ ENCROACHMENT IS APPROVED IN WRITING BY YORK REGION OR ITS DESIGNATE AND WHERE THERE IS A REASONABLE POSSIBILITY OF ACCIDENTAL IMPACT UPON THE MAIN STEM OR SCAFFOLD BRANCHES OF A TREE TO BE PRESERVED

York Region Environmental Services

TREE STEM PROTECTION

DATE: JANUARY 2022			SCALE N.T.S.
REV.	X	X	NHF - 405

Appendix E: City of Vaughan Tree Protection Plan Information

Two tree protection devices must be in place and approved by Vaughan Forestry before a Private Tree Application will be approved. These devices are:

- A Tree Protection Plan
- Hoarding must be installed

Tree Protection Plan

Tree Protection Plans are to include a description of tree protective measures (e.g. hand digging, compaction reduction plans, hoarding installations, etc.)

- Trees being protected are to be shown on all plans.
- Tree protection hoarding locations must be shown along with Tree Protection Zones (TPZ).
- TPZ distances from trees are shown in Table 1
- Areas within the TPZ are considered "no touch areas". Grading, excavation, machinery access and material storage are prohibited within "no touch areas".
- Machinery access and storage sites must be shown on plans. If access is required through TPZ areas, a compaction reduction plan is required as part of the report.
- The compaction reduction plan is to include materials and installation techniques to be employed, along with post construction treatments.

Hoarding

There are two types of hoarding: Heavy Duty Hoarding, used in most cases (see detail at Figure E1), and a Light Duty Hoarding (see detail at Figure E2), to be used only:

- Where traffic site lines will be blocked,
- Where hoarding is protecting naturalized areas and woodlots.

Trunk Diameter (DBH)[i]	Minimum Protection Distances Required	
	City Owned and Private Trees[ii]	Trees in Naturalized Areas *Whichever of the two is greater*
<10 cm	1.2 m	The drip line or 1.2 m
10 – 20[iv] cm	1.2 m	The drip line[iii] or 1.2 m
21 – 30 cm	1.8 m	The drip line or 3.6 m
31 – 40 cm	2.4 m	The drip line or 4.8 m
41 – 50 cm	3.0 m	The drip line or 6.0 m
51 – 60 cm	3.6 m	The drip line or 7.2 m
61 – 70 cm	4.2 m	The drip line or 8.4 m
71 – 80 cm	4.8 m	The drip line or 9.6 m
81 – 90 cm	5.4 m	The drip line or 10.8 m
91 – 100 cm	6.0 m	The drip line or 12.0 m
> 101 cm	6 cm protection for each 1 cm diameter	12 cm protection for each 1 cm diameter or the drip line[v]

[i] *Diameter at breast height (DBH) is the measurement of the tree trunk taken at 1.4 metres above ground level.*

[ii] *Tree Protection Zone distances are to be measured from the outside edge of the tree base.*

Figure E 1. Tree Protection Distances

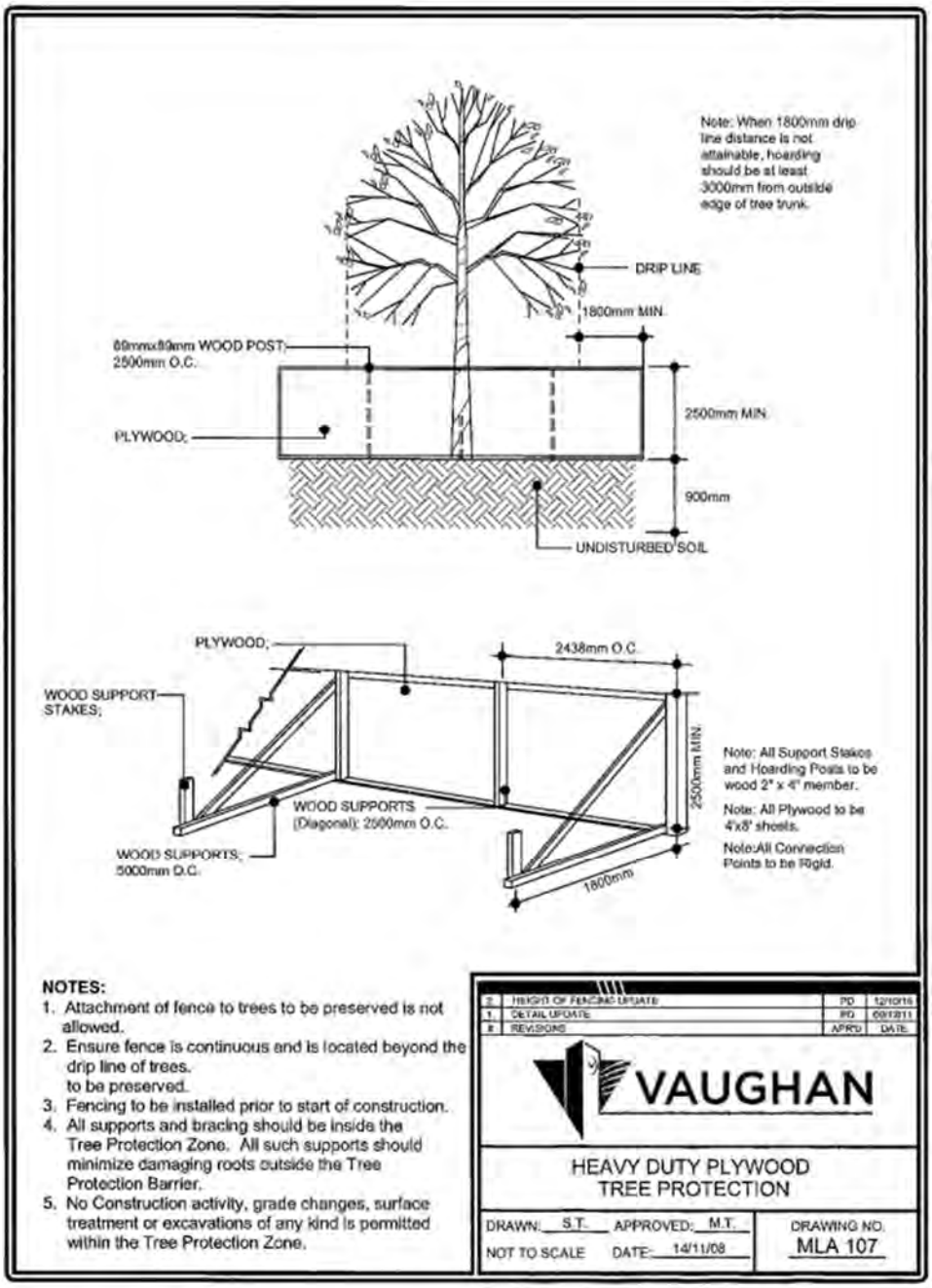


Figure E 2. Heavy Duty Tree Hoarding Protection Detail (Plywood)

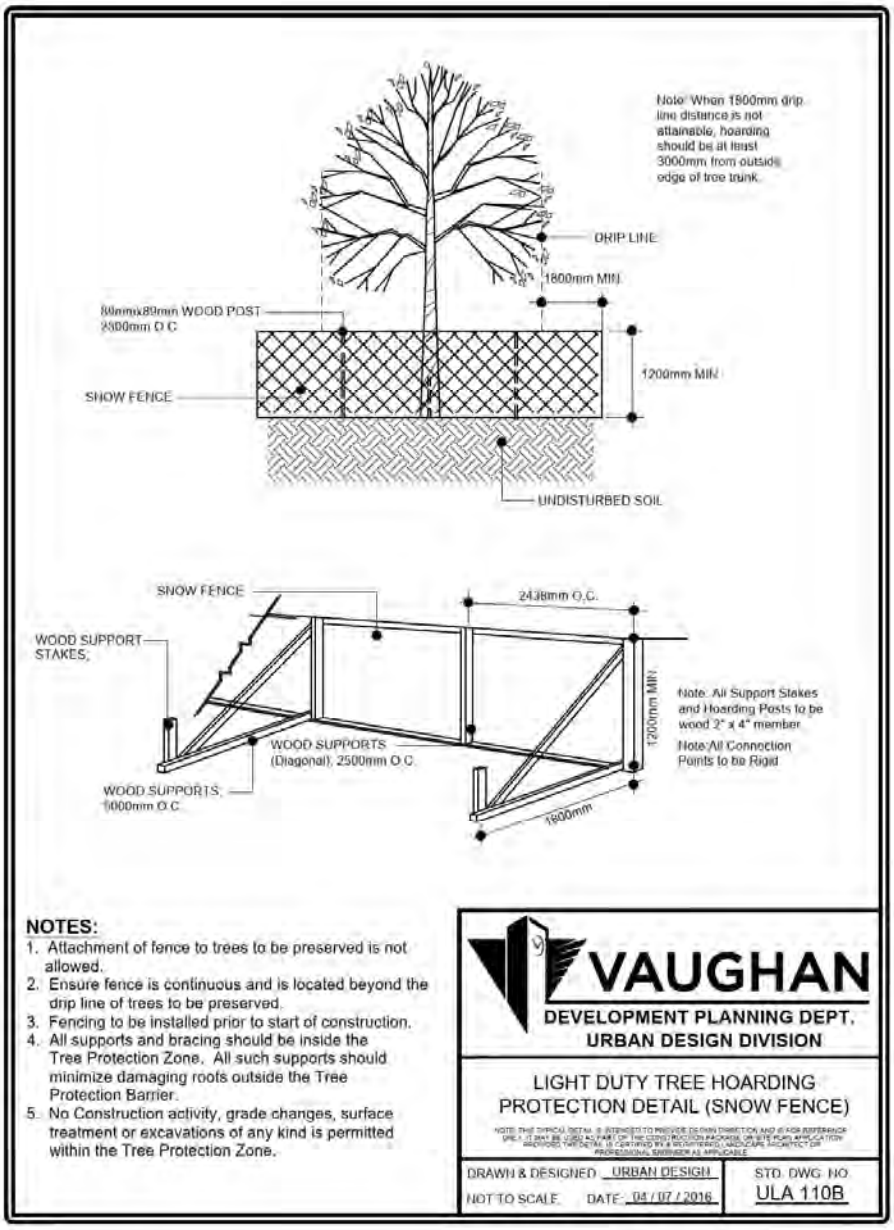


Figure E 3. Light Duty Tree Hoarding Protection Detail (Snow Fence)